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The *Materia Signata* of Cajetan

by Joseph Bobik

THE POSITIONS OF CAJETAN ON INDIVIDUATION

CAJETAN proposed two opinions concerning the principle of individuation, one in his youth,[1] the other at a maturer age. The first appears in his commentary on the *De Ente et Essentia* of Saint Thomas. In the text which occasions Cajetan's lengthy effort, Saint Thomas raises a difficulty concerning the possibility of defining universals. Since matter is the principle of individuation, it might perhaps seem to follow, he (Saint Thomas) observes, that the essence which includes within itself both matter and form is only particular and not universal. If this were so, it would follow that, the essence being what the definition signifies, universals would have no definition. Saint Thomas resolves this difficulty by pointing out that the matter which is the principle of individuation is not any matter whatsoever, but only that matter which is included in the individual nature, only signate or designated matter (*materia signata*), e. g., this flesh and these bones, individual matter,

[1] "Prima opinio [Caietani] habetur in commentario in *De ente et essentia*; quod opus, subtile admodum et abstrusum valde, exaravit Caietanus cum esset viginti quinque annorum et adhuc aestuaret iuvenili ardore." Umberto Degl'Innocenti, O. P., "Animadversiones in Caietani Doctrinam de Corporum Individuatione," *Divus Thomas* (Piacenza), LI (1948), 21.

existing matter. This is matter considered under determined dimensions.[2] That matter, on the contrary, which is included in the specific nature is nonsignate or undesignated matter (*materia non signata*), e. g., flesh and bones absolutely, specifically common or universal matter, matter as known. Individual matter is not included in the definition of man as man, but it would be included in the definition of Socrates if Socrates had a definition. The definition of man can include only that matter which belongs to man as man. This is flesh and bones absolutely taken.[3]

Cajetan's formulation of the problem of the individuation of bodily substances does not differ from that of Saint Thomas. Like Saint Thomas, he is concerned with discovering the primary roots, the intrinsic principle, of the incommunicability of the individual nature to others as to inferiors,[4] and of its dis-

[2] See, by the present writer, "Dimensions in the Individuation of Bodily Substances," *Philosophical Studies* (Maynooth) IV (1954), 73-74.

[3] "Set quia indiuiduationis principium materia est ex hoc forte uidetur sequi quod essentia que in se materiam complectitur simul et formam sit tantum particularis et non universalis; ex quo sequeretur quod universalia non haberent diffinitionem, si essentia est id quod per diffinitionem significatur. Et ideo sciendum est quod materia non quolibet modo accepta est indiuiduationis principium, sed solum materia signata; et dico materiam signatam que sub determinatis dimensionibus consideratur. Hec autem materia in diffinitione que est hominis in quantum est homo non ponitur; set poneretur in diffinitione Socratis si Socrates haberet diffinitionem. In diffinitione autem hominis ponitur materia non signata; non enim in diffinitione hominis ponitur hoc os et hec caro, set os et caro absolute que sunt materia hominis non signata. Sic ergo patet quod essentia Socratis et essentia hominis non differunt nisi secundum signatum et non signatum. . . . Sic eciam essentia generis et speciei differunt secundum signatum et non signatum, quamuis alius modus designationis sit utrobique, quia designatio individuei respectu speciei est per materiam determinatam dimensionibus, designatio autem speciei respectu generis est per differentiam constitutiuam que ex forma rei sumitur." Saint Thomas, *De Ente et Essentia*; ch. 2, ed. Roland-Gosselin, pp. 10, 11. The edition of M.-H. Laurent, O. P., has *certae dimensiones* in place of *determinatae dimensiones*: "Et dico materiam signatam, quae sub *certis dimensionibus* consideratur." *Thomae de Vio, Caietani, in De Ente et Essentia D. Thomae Aquinatis Commentaria*, p. 49, n. 31. The meaning is the same.

[4] He asks: What renders the *specific nature* incommunicable? (See

tinction from others of the same species.[5] He takes particular care to emphasize the two-fold character of the problem: incommunicability and distinction.[6]

His solution of the problem, however, differs quite radically from that of Saint Thomas.[7] Before presenting his interpretation, Cajetan states that the position of Saint Thomas given here in the *De Ente et Essentia* and in many other places is that designated matter (*materia signata*) is the principle of individuation. He remarks, furthermore, that Thomists both agree and differ concerning this position. They agree, inasmuch as they hold that both matter and quantity contribute to individuation. They differ as regards the role they attribute to quantity. Some hold that an aggregate of matter and actual quantity (*aggregatum ex materia et quantitate*), matter as actually quantified (*materia quanta*), is the intrinsic principle of individuation, the matter conferring incommunicability to

below, note 6). This is one with asking what makes the individual nature incommunicable; for the specific nature as specific is always communicable. Only as found in the individual is it further incommunicable.

[5] Cajetan does not appear aware of the fact that Saint Thomas, in the text of the *De Ente et Essentia* which occasions Cajetan's consideration of the principle of individuation, is not directly concerned with the principle of individuation in respect of incommunicability to others as to inferiors and in respect of numerical distinction (numerical distinction being preceded analytically by numerical unity and identity). See "Dimensions in the Individuation of Bodily Substances," *art. cit.*, 71-75.

[6] ". . . cum de principio individuationis agitur, . . . nihil aliud quaeritur nisi per quod primo natura specifica reddatur incommunicabilis ita quod repugnet sibi communicari pluribus, ut superius inferioribus communicatur; atque per quid hoc individuum primo distinguitur realitur ab aliis ejusdem speciei. Duo ergo quaeruntur concurrentia ad individuationem, scilicet quo, primo, natura specifica reddatur incommunicabilis, et quo, primo, realiter distinguatur ab aliis ejusdem speciei. Et advertas bene singulas partes tituli, quas declaravimus, quoniam aliquos in hac parte errare invenio. . . . non loquimur nunc nisi de individuatione substantiarum materialium." *In De Ente et Essentia*, ch. 2, q. 5; ed. Laurent, p. 50, n. 34.

[7] For a discussion of the role of dimensive quantity in Saint Thomas' solution to that aspect of the problem of individuation which bears upon the distinction of an individual nature from others of the same species, see "Dimensions in the Individuation of Bodily Substances," *art. cit.*, 60-71.

others as to inferiors, the actual quantity conferring numerical distinction from others of the same species. For these Thomists, this aggregate, this actually quantified matter, is designated matter.[8] Other Thomists hold the position that the intrinsic principle of individuation, both in respect of incommunicability

[8] Though unnamed, these are presumably the older Thomists (see below, this note). Yet none of the older Thomists ever spoke of an aggregate, i. e., of an *unum per accidens*. Rather they were careful to point out the *per se* oneness or unity of the principle of individuation. Father Degl'Innocenti makes this observation: ". . . quid praecise voluerit [Caietanus] sua duplici explicatione, vel *contra quos adversarios proprie dimicaverit, ignoratur*. Id unum clare deprehendi potest apud maximum Aquinatis commentatorem, eum videlicet totis viribus excludere voluisse materiam signatam esse 'aggregatum' ex materia et quantitate, et unum per accidens. Sed . . . hoc est falsum de Capreolo eiusque discipulis, qui numquam loquuntur de 'aggregato,' et semper de uno per se . . ." Umberto Degl'Innocenti, O. P., "Animadversiones in Caietani Doctrinam de Corporum Individuatione," *art. cit.*, 45.

It ought to be noted that Cajetan's contemporaries were quick to perceive that his teachings concerning the principle of individuation differed from those of Saint Thomas. Having explained Cajetan's opinion, Sylvester of Ferrara (1474-1528) writes: ". . . licet haec opinio [of matter with a particularized capacity for quantity; see below, pp. 131-36] doctissimi viri sit, non tamen mihi videtur ad mentem Sancti Thomae accedere." Then, having pointed out an inadequacy of Cajetan's opinion, Sylvester concludes: "Non ergo materia signata dicit tantum ipsam materiam primam per exclusionem omnis rei ab ipsa realiter distinctae [as Cajetan held], sed materiam *cum* aliqua forma limitante. Propter quod alia opinio mihi magis ad mentem Sancti Thomae esse videtur, quae tenet per materiam signatam intelligi *materiam sub quantitate*: ita quod ad individuationem et materia et quantitas [actual quantity and as inhering] concurrit." Sylvester of Ferrara, *In I C. G.*, 21, IV. Sylvester follows with his own opinion which is one with that of Saint Thomas and of John Capreolus (1380-1444).

Father Degl'Innocenti, quoting Paul Nazarius Cremonensis, O. P. (1556-1646), points out that John Capreolus, by far the chief among Thomists, taught that "materia signata *actuali* quantitate" is the principle of individuation. And this view was held in common by all the older Thomists (*omnes antiquiores Thomistae*), e. g., Paul Soncinas (died 1494), Dominic of Flanders (died 1500), Sylvester of Ferrara (1474-1528). Whenever Saint Thomas spoke of individuation, he spoke always of matter and quantity (or dimensions), never of *materia capax* (the first opinion of Cajetan; see below, pp. 131-36) nor of *materia radix* or *prachabens* (the second opinion of Cajetan; see below, pp. 137-41). And he was so understood by all the older Thomists. Umberto Degl'Innocenti, O. P., *art. cit.*, 24.

and in respect of distinction from others of the same species, is simply *materia signata*, which is *not* the actually quantified matter, not the mere aggregate of matter and actual quantity, of the first position.[9] Cajetan adopts the latter position as the better of the two, and as that of Saint Thomas himself.[10] But what precisely is included in the intelligibility of this matter, which is indeed a matter designated by quantity, yet not actually quantified?

Materia signata is nothing other than prime matter considered so with a capacity for *this* quantity that it has no capacity for *that* quantity.[11] This particularized capacity, this particularized receptive potency, is nothing really distinct from matter. It adds to matter something real, but distinct from it in notion only (*secundum rationem tantum*). Of itself matter does not demand in its definition this particularized capacity. Yet *materia signata*, if it were definable (nothing individual is definable), would demand it in its definition; *materia signata* would demand in its definition this something real which is not really, but in notion only, distinct from matter.[12]

[9] Cajetan himself is the author of this theory, which is that of *materia capax*.

[10] ". . . opinio S. Thomae posita ab eo hic et in multis aliis locis est quod materia signata est principium individuationis. Circa hanc conclusionem advertendum est, quod Thomistae inter se differunt et conveniunt. Conveniunt in hoc omnes, quod ad individuationem duo concurrere dicunt materiam et quantitatem. Differunt autem, quia aliqui tenent quod aggregatum ex materia et quantitate sit intrinsecum individuationis principium: materia dante incommunicabilitatem sive distinctionem in se, quantitate dante distinctionem ab aliis; et tale aggregatum dicunt esse materiam signatam. Alii vero longe melius sentiunt dicentes, quod principium intrinsecum individuationis et quoad incommunicabilitatem et quoad distinctionem ab aliis est materia signata, non materia quanta, seu aggregatum ex materia et quantitate. Et cum hoc, judicio meo, sit doctrina S. Thomae vera ut ostendetur, ideo hanc declarare volumus et tueri, declarando primo quid importet materia signata; secundo excludendo primam expositionem Thomistarum; tertio probando conclusionem intentam." *In De Ente et Essentia*, ed. Laurent, p. 53, n. 37.

[11] "Materia signata nihil aliud est quam materia capax hujus quantitatis, ita quod non illius. . . ." *Ibid.*, p. 53, n. 37.

[12] "Nihil ergo addit materia signata supra materiam, nisi capacitatem

To point out the rigorously formal character of his consideration, Cajetan appeals to the process of natural generation, dividing the process into analytically prior and posterior moments. It is to be noted, first of all, that it is a particular agent which confers upon matter the particularization of its capacity for quantity, which of itself matter does not have. The analytical moment in which this particularization of capacity is conferred is that first moment, prior to the advent of any accidental forms, in which the particular composite first terminates generation and comes to be. In that moment, the matter which is an intrinsic part of Socrates is so appropriated to (made proper to) Socrates, by the activity of the particular agent, that it is without capacity for any quantity but that quantity which Socrates in a posterior analytical moment will determine for himself. For all things in nature have a determined quantity and a determined limit of growth. Matter, in this first analytical moment, with such a particularized capacity for the quantity which will come to the composite in a posterior analytical moment, is *materia signata*.[13] Because it is matter designated

hujus quantitatis, ita quod non illius. Capacitas autem materiae respectu hujus quantitatis nihil aliud est quam potentia receptiva hujus quantitatis, ita quod non illius; potentia autem receptiva nihil realiter distinctum in recto dicit, sed addit aliquid reale distinctum secundum rationem tantum a materia. . . . materia enim signata non est diffinibilis nisi per hanc quantitatem si diffiniretur. . . . Materia autem secundum se hanc quantitatem in sua diffinitione non exigit." (*Ibid.*, p. 54.) ". . . proportio materiae signatae ad hanc quantitatem est proportio potentiae ad proprium actum; unde sicut potentia materiae est *eadem realiter* ipsi materiae, et tamen dependet a forma, ita potentia seu capacitas materiae respectu hujus quantitatis, quae vocatur ejus signatio, dependet a quantitate *et tamen est eadem materiae*. *Ibid.*, p. 58, n. 39, ad 1.

[13] "Materia signata nihil aliud est quam materia capax hujus quantitatis, ita quod non illius: haec namque materia est pars intrinseca Sortis de diffinitione ejus si diffiniretur. Imaginandum est enim quod agens particulare, puta hoc semen, continue appropriat materiam ad formam inducendam hoc modo, quod sicut semen humanum appropriat materiam ad animam humanam, ita hoc semen ad hanc animam. Unde cum in primo instanti generationis Sortis, quod est primum esse Sortis et primum non esse formae praecedentis et accidentium, primo ordine naturae fiat par-

(*signata*) by a particularized *capacity* for quantity, it is *not* actually quantified matter. This is why, Cajetan observes, Saint Thomas does not say that *materia signata* is "materia *cum* certis dimensionibus," but rather "materia *sub* certis dimensionibus,"[14] *cum* being indicative of the actual inherence of quantity, *sub* being indicative of *materia capax* which is *not* actually quantified matter. *Materia capax certarum dimensionum, materia sub certis dimensionibus*, is the principle of individuation. Nor does *materia signata* exclude the *qualities* which Socrates in a posterior analytical moment will determine for himself. Not only does a particularized capacity for *quantity* enter into the intelligibility of *materia signata*, but likewise a particularized capacity for *quality*. For the matter of Socrates, in that first analytical moment, is without capacity for any qualities but those which he will determine for himself. This is why Cajetan can equate *materia signata*, *materia propria individui* (i. e., *materia individualis*), and *materia sub certis* (*determinatis*) *dimensionibus*—the *this* flesh and *these* bones of Saint Thomas.[15] But because it is matter designated by a particularized *capacity* for quality, it is *not* actually qualified matter. However, because quantity alone is received *imme-*

ticulare compositum, deinde naturali ordine sequuntur omnia accidentia (in via nostra); in illo priori secundum naturam, quo compositum particulare terminat per se primo generationem, materia quae est pars intrinseca ejus, scilicet Sortis, ita est appropriata ipsi Sorti ab agente particulari quod non est capax alterius quantitatis quam ejus quam Sortes sibi determinat: omnium enim natura constantium determinata est ratio magnitudinis et augmenti, ut dicitur II *de Anima* . . . , et talis materia vocatur materia signata." *Ibid.*, pp. 53-54. ". . . quantitatem causare talem signationem in materia nihil aliud est quam materiam esse sub hoc agente factam capacem adeo hujus quantitatis, quod non illius, et sic quantitas concurrit ad signationem materiae ut actus *propter quem talis capacitas fit.*" *Ibid.*, p. 59, n. 39, ad 3.

[14] ". . . et propterea S. Thomas non dixit materiam signatam materiam *cum* certis dimensionibus, sed *sub* certis dimensionibus. . . ." *Ibid.*, p. 54.

[15] ". . . unde materia propria individui, et materia signata, et materia sub certis dimensionibus idem important; . . ." *Ibid.*, p. 54. The *this* flesh and *these* bones of Saint Thomas, however, includes *actual* quantity and *actual* qualities.

diately into the substance, and because numerical distinction takes its origin from quantity alone, Cajetan prefers, in accord with the strictly formal nature of the consideration, to speak of the principle of individuation as matter under the *dimensions* which the newly generated composite will determine for itself, and *not* under the *qualities* which it will determine for itself.[16] *Materia signata*, thus, strictly considered as the principle of individuation, i. e., of incommunicability to others as to inferiors and of numerical distinction, does not say matter actually quantified. Rather it says matter with a particularized *capacity* or *receptive potency* for quantity. Just as matter with an ordering to universal forms distinguishes generically, e. g., the heavenly bodies from terrestrial bodies; so likewise matter with an ordering to this or that quantity distinguishes numerically. *Materia signata* does not say a mere aggregate of matter and quantity. It signifies matter directly, quantity obliquely; just as the potency of matter signifies matter directly, and obliquely the act to which it is related, because it is definable only through this act.[17]

[16] ". . . non solum quantitas tali modo signat materiam sed etiam qualitates propriae. Materia enim Sortis ita est capax harum qualitatum quod non aliarum, sed quia sola quantitas immediate recipitur in substantia, et ex sola quantitate oritur radicaliter distinctio materialis, ideo ad propositum materiam signatam materiam sub certis *dimensionibus* et *non* sub certis *qualitatibus* dicimus." *In De Ente et Essentia*, ch. 2, q. 5, ad 4; ed. Laurent, p. 59.

Cajetan is correct in pointing out that the *materia signata* of Saint Thomas includes *these (individual) qualities* as well as *this (individual)* quantity. But for Saint Thomas both the quantity and the qualities included in *materia signata* are *actually inhering determinations*. See preceding note. See also the reference given above in note 2.

[17] ". . . et alibi dicit [S. Thomas] quod sicut materia in ordine ad formas generales, puta formam totalem et partialem, distinguit generice corpora coelestia ab inferioribus; ita materia in ordine ad hanc vel illam quantitatem distinguit numeraliter in rebus materialibus. Materia igitur signata non dicit aggregatum ex materia et quantitate, sed materiam in recto significat, quantitatem vero in obliquo; sicut potentia materiae significat materiam in recto, in obliquo vero actum quem respicit eo quod non nisi per actum est diffinibilis. Et sic manifestum est quid importet materia signata." *In De Ente et Essentia*, ed. Laurent, p. 54.

It is clear enough from the preceding that the quantity which this particularized capacity or potency of prime matter is related to is *terminated* quantity, the *terminated* quantity which the newly generated composite will determine for itself in a posterior analytical moment. And Cajetan leaves no doubt that it is terminated quantity which he intends. He states explicitly that that quantity which contributes to individuaion as an originative, but not intrinsic, principle is terminated quantity. To be sure, it is not quantity so terminated as to permit no variation. It is terminated quantity permitting a certain range or latitude or variation. Nonetheless, it is terminated. Just as each natural species determines for itself a maximum and a minimum quantity, thus allowing variation within these limits; so does each individual determine for itself *this* terminated quantity within *these* limits.[18] The designation (*signatio*), therefore, whereby matter is rendered *materia signata* and the principle of individuation is its *particularized capacity* or *potency* or *exigency* [19] for terminated quantity.[20]

To be sure, Cajetan must insist that the quantity which the

[18] ". . . quantitas illa quae ad individuationem ut originale non intrinsecum individuationis principium concurrit est quantitas *terminata*. . . . quantitas *terminata* ad individuationem concurrens non stat in indivisibili sed latitudinem habet. Sicut enim quaelibet species naturalis determinat sibi quantitatem maximam et minimam infra quamdam latitudinem: ita et quodlibet individuum determinat sibi hanc quantitatem infra tales limites et non in indivisibili. Unde potest fieri rarefactio sine ejus, ut individuativa est, variatione: non enim hic accipitur quantitas *terminata* punctualiter sed cum certa latitudine." *Ibid.*, p. 59, n. 39, ad 5.

[19] Particularized *capacity* for quantity, or particularized *potency*, or particularized *exigency*, are one for Cajetan. The characterization of the designation (*signatio*) of matter as particularized exigency is found in the first objection: ". . . impossibile est aliquid dependens a posteriori naturaliter esse idem priori naturaliter, quia tunc esset prius et non prius; sed substantia est prior naturaliter quantitate: igitur nihil causatum a quantitate sive qualitercumque *praexigens* naturam quantitatis potest esse idem substantiae; non igitur signatio ista a quantitate causata est eadem substantia." *Ibid.*, p. 57, n. 38, obj. 1.

[20] ". . . capacitas materiae respectu hujus quantitatis . . . vocatur ejus signatio. . . ." *Ibid.*, p. 58, n. 39, ad 1.

particularized capacity of prime matter confronts is *terminated* quantity. For it is *natural* quantity, the quantity which the individual determines for itself according to the requirements of its individual nature. But he also insists, arguing against the *haecceitas* of Scotus, that the numerical distinction of individuals of the same species is reduced to quantity, inasmuch as quantities, remaining formally or specifically identical, are distinguished numerically by their claim upon a situation or position of their own.[21] Can we see in this some approach to Saint Thomas' notion of unterminated dimensions? Though it is natural, hence terminated, quantity which in fact contributes to individuation, it contributes Saint Thomas insists, not because it is natural or terminated, but precisely because it is dimensive quantity saying spread-out-ness with a claim to situation or position. True, Cajetan does not draw this distinction as does Saint Thomas. Nonetheless, he insists that this particularized capacity of matter is related to natural, hence terminated (within certain limits), quantity, which can confer numerical distinction upon individuals of the same species because of its claim to situation or position. It appears that Cajetan did not see that the notion of dimensive quantity claiming situation is one with Saint Thomas' notion of unterminated dimensions.[22] For he does not speak of unterminated dimensions as contributing to individuation.[23]

[21] "Ad secundum dicitur quod differentia individuorum reducitur ad quantitates. Quantitates autem differunt sitibus propriis qui sunt differentiae quantitatis. . . ." *Ibid.*, p. 60, n. 39, ad secundum Scoti.

[22] For a discussion of the nature of dimensive quantity and of its relation to the distinction between terminated and unterminated dimensions, see "Dimensions in the Individuation of Bodily Substances," *art. cit.*, 60-71.

[23] It is interesting to note that Cajetan gives a detailed account of the opinion of Averroes concerning the immediacy of the inherence of unterminated dimensions in prime matter. This he follows with an account of Saint Thomas' position concerning the immediacy of the inherence of unterminated dimensions in the *composite* in act. Arguing against Averroes, he even states that quantity is an inseparable accident following upon substantial corporeity: ". . . quando generatio terminatur per se

The second opinion of Cajetan, older now and more mature,[24] appears in his commentary on the *Summa Theologiae*. He begins by retracting his previous opinion of matter with a particularized capacity or *potency* for this quantity and not for that. By matter under certain (terminated) dimensions he no longer understands matter with a *potency* for quantity, for that potency, being in the genus of quantity, is an accident. Socrates, thus, would not be *per se* one. His substantial numerical unity would not be a *per se* unity.[25] For act and potency divide each genus, and just as potency for substantial *esse* is not outside the genus of substance, so potency for quantity is not outside the genus of quantity.[26] The perseity of the substantial numerical unity of Socrates cannot be explained by a principle (*materia sub certis dimensionibus*) involving an element of the accidental—particularized *potency* for quantity. By matter under certain (terminated) dimensions Cajetan now (as before) understands matter which is numerically distinct. As before, it is matter considered in the first instant of the generation of the composite, prior to the advent of any accidental form.[27] It is,

primo ad compositum substantiale, generantur consecutive ejus accidentia inseparabilia de quorum numero est quantitas quae substantialem corporeitatem sequitur." *Ibid.*, p. 226. He does not say, however, that the inseparable accident which follows upon substantial corporeity is quantity as unterminated. Nor once in this discussion does he give indication of adopting the notion of unterminated dimensions in his own account of individuation. *Ibid.*, pp. 223-227, n. 139.

[24] "Aetate tamen adultior et ingenio maturior factus, id est cum prope quadragesimum vitae annum attigisset, Caietanus paulo aliter opinatus et locutus est. Est haec secunda opinio quam insignis S. Thomae interpres . . . exhibet in commentario ad quaest. 29ae Primae Partis: . . ." (Umberto Degl'Innocenti, O. P., "Animadversiones in Caietani Doctrinam de Corporum Individuatione," *art. cit.*, 21-22.)

[25] "Per materiam autem sub certis dimensionibus, non intelligo, ut olim exposui in commentariis *de Ente et Essentia*, materiam cum potentia ad quantitatem: quoniam potentia illa . . . est in genere quantitatis; et sic Socrates non esset unum per se." Cajetan, *In S. T.*, I, 29, 1, VIII.

[26] ". . . sicut potentia ad qualitatem non est aliquid extra genus qualitatis, ita potentia ad essę substantiale non est aliquid extra genus substantiae." St. Thomas, *In I Phys.*, 15, n. 3.

[27] "Hoc autem est materia, quae est altera pars compositi primo termi-

thus, not considered as actually the subject of quantity, or as actually quantified. But it is not considered as a particularized capacity or potency for quantity, rendered so particularized by the activity of the particular agent inducing generation (this is the first opinion). According to this second opinion, it is matter considered as, prior *by its very nature* to quantity, its (i. e., quantity's) foundation, root, and cause. Considered in this way, matter is *of itself* numerically distinct (the particularizing activity of the particular agent therefore is not involved in this second opinion), and this before the advent of actual quantity, i. e., before matter is actually quantified. This is the principle of individuation, the theory of *materia radix.*[28]

This theory, according to Cajetan, is proportionate to the substantial and *per se numerical unity* which is the effect of individuation. The principle (numerically distinct matter) which distinguishes this man from that man is the *foundation* and *root* of quantity. Taken precisely as foundation and root of quantity, matter can confer the numerical distinction which belongs primarily to quantity.[29] That is to say that, even in that first instant of generation, matter considered precisely as the foundation and root of quantity (not, therefore, as actually the subject of quantity; this is important to note) is not outside the camp of those principles which participate in the nature of

nantis generationem substantialem in rerum natura, in primo instanti naturae, ante adhaesionem accidentium." Cajetan, *In S. T.*, I, 29, 1, IX.

[28] "Sed intelligo [per materiam sub certis dimensionibus] materiam distinctam numero, non ut subiectum quantitatis, sed *ut prius natura ipsius fundamentum, radix et causa*; ita quod ipsa materia *in se* est prius sic distincta quam *quanta*; ut sic effectus proportionetur causae." *Ibid.*, 29, 1, IX.

[29] "Distinctio enim numeralis qua Socrates distinguitur a Platone, inquantum sunt *isti* homines, non est distinctio quantitativa [i. e., is not the distinction conferred by *actual* quantity], sed fundamentum quantitativae distinctionis. Et similiter principium distinctivum huius hominis ab illo, ut sic, est radix et fundamentum quantitatis [and not therefore *actual* quantity itself], et consequenter distinctionis sequentis ipsam [sc. quantitatem]." *Ibid.*, 29, 1, IX.

quantity. Indeed, to speak more properly, Cajetan points out, matter taken in this moment in a sense precontains (*quasi praehabet*) the nature of quantity. Matter taken as foundation, root and cause, of quantity is one with matter as precontaining the nature of quantity. Because it is more to precontain than to participate, if those things which participate in a certain nature can in some way produce its effect, so much the more can those things which precontain that nature (*praehabentia naturam*) produce the same effect.[30] Because in that first instant of generation matter *precontains* that quantity which the newly generated composite will determine for itself according to the exigencies of its individual nature, it can in this prior moment confer upon the composite numerical distinction and, at the same time, preserve its (*i. e.*, the composite's) *per se unity*. For, according to this position of Cajetan, nothing accidental, whether potential or actual, contributes to individuation.

Nor does Cajetan feel that his theory of *materia radix* denies that Aristotelian and Thomistic maxim which states that numerical material distinction belongs primarily to quantity, and only through quantity to other things. Numerical distinction, he insists, indeed belongs primarily to actual quantity; but it belongs also to whatever participates the nature of quantity. Nor need its participants possess it formally; they may *precontain* it.[31] Numerical distinction belongs to prime matter *of itself* and *before* actual quantification, simply because prime

[30] "Materia autem, quae radix fundamentumque est quantitatis, non est, etiam in illo priori, extra participantia quantitatis naturam: immo, ut melius loquamur, est quasi praehabens quantitatis naturam. Et quoniam magis est praehabere quam participare, si participantia naturam aliquam quoquomodo possunt in effectum illius, quanto magis praehabentia naturam hoc poterunt?" *Ibid.*, 29, 1, X.

[31] "Nec propterea nego illam maximam, ex sensibus Aristotelis ac S. Thomae habitam, scilicet quod distinctio numeralis materialis primo convenit quantitati, et consequenter per illam ceteris, . . . Quoniam participare naturam eius cui primo convenit aliquid, pluribus modis contingit: nec oportet illam formaliter salvari in omnibus ipsam participantibus, . . ." *Ibid.*, 29, 1, X.

matter *precontains* (*praehabet*) the nature of quantity. Of its nature possessing numerical distinction, of its nature prime matter can confer numerical distinction.

Cajetan is ever bent upon preserving the *per se* unity of the numerically distinct composite. Nothing accidental, whether in the line of potency or act, must enter the intelligibility of the principle of individuation. Having barred *actual* quantity from his first opinion, clearly to preserve *per se* unity, for the same reason after maturer consideration he denied a role to *potential* quantity in his second opinion.

Cajetan concludes the exposition of his second opinion with a statement which summarizes its full signification: the numerical distinction which matter confers is not the formal effect of actual quantity, simply because *matter under certain dimensions*, the principle of individuation, does not contain quantity as a form inhering in it.[32] Though *materia radix* or *praehabens* replaces *materia capax*, the other elements of his first opinion are explicitly retained.[33] The quantity, therefore, which matter precontains in the first instant of generation is natural and *terminated* quantity, the quantity which the newly generated composite will determine for itself according to the requirements of its individual nature. Qualities, too, it appears, may be said to be precontained in matter, but only mediately, only through the quantity which alone is immediately precontained.[34] Thus in this second opinion, *materia signata* would have its designation (*signatio*) both from the quantity and from the

[32] ". . . distinctio de qua loquimur non sit formalis effectus quantitatis, nec materia huiusmodi [i.e., materia sub certis dimensionibus] sic [i.e., as a form inhering in matter] contineat quantitatem: . . ." *Ibid.*, 29, 1, X.

[33] "Reliqua autem huius materiae ibidem [i.e., in his commentary on the *De Ente et Essentia*] tractata sunt." *Ibid.*, 29, 1, X. It is not wholly clear whether Cajetan intended to retain in his second opinion the *particularizing* activity of the particular agent, which he invoked in the first. Because he speaks of matter as *of itself* numerically distinct (. . . *materia in se est prius sic* [sc., *numero*] *distincta quam quanta*), it would appear that this particularizing activity is not retained.

[34] See above, pp. 133-134.

qualities which it precontains. *Materia sub certis dimensionibus*, on the contrary, which is the principle of individuation very formally considered, has its designation (*signatio*) from the quantity *alone* which it precontains.

The Position of John of St. Thomas on Individuation

For John of St. Thomas, as for Cajetan and most Thomists, both matter and dimensive quantity have a role in individuation. But his understanding of the signing or designation (*signatio*) of matter by quantity is proper to himself, though bearing the influence of Cajetan. For John of St. Thomas, as for Cajetan, the signing of matter is not accomplished through quantity as actually inhering in matter. Rather it is accomplished by quantity as a form dividing and separating, i. e., as unterminated. Unlike Cajetan, who may well not have seen that the notion of pure dimensive quantity is one with Saint Thomas' notion of unterminated dimensions,[35] John of St. Thomas explicitly identifies the two. Having quoted that text of Saint Thomas in which terminated and unterminated dimensions are distinguished, John of St. Thomas observes that unterminated quantity according to Saint Thomas' understanding is nothing other than what he himself characterizes as quantity considered as dividing and separating (or distinguishing) by virtue of its claim upon situation or positon.[36] But this signing must be properly understood. According to John of St. Thomas, matter intrinsically and of its very nature faces unterminated quantity considered precisely as the *term* of matter's intrinsic ordering to it. This is one with saying that unterminated quantity indeed signs (confers *signatio* upon) matter, not by actually informing matter, but only as the *term*

[35] See above, p. 136.

[36] "Quare secundum D. Thomam quantitas interminata nihil aliud est quam quantitas, ut praecise facit divisionem et differentiam situs." John of St. Thomas, *Curs. Phil.*, ed. B. Reiser (Turin, 1930), II, p. 787 a 38-41.

of matter's *intrinsic ordering* to it. Taken in this way, quantity is the condition or connotation of individuation. Matter is first and radical as the *principle* of individuation. Quantity as term is first only *as condition.*[37] Thus, for John of Saint Thomas, *materia quantitate signata* is one with matter *ordered* to quantity as unterminated, as dividing. To be sure, explains John of St. Thomas, the division of matter is not actually accomplished without the actual quantity informing the composite. But individuation occurs analytically prior to this. Quantity as informing the composite flows from the substantial form, hence is *consequent* upon substantial form. Considered in this way, quantity cannot contribute to individuation; indeed it itself needs to be individuated. Considered, however, as unterminated or dividing, quantity *precedes* the substantial form, but this in the line of *material* causality, as is often said of dispositions. In the line of *formal* causality, these accidental dispositions follow the substantial form, because they are considered as informing the composite.[38] Considered as unterminated or dividing, hence *preceding* the substantial form in the line of material causality, quantity, signing matter as the term of its intrinsic ordering, can be considered as having distinguished matter into diverse portions, each claiming a diverse

[37] "Signatio materiae non fit formaliter per ipsam quantitatem tamquam per formam inhaerentem materiae et afficientem ipsam, sed fit per intrinsecum ordinem materiae ad quantitatem ut ad formam dividentem et separantem, et ita quantitas potius est terminus signationis materiae, ad quam dicit ordinem, quam forma intrinsece signans, et hoc modo dicitur se habere ut conditio et connotatio individuationis. Et in isto genere, scilicet ut conditio, quantitas est primum, licet materia sit primum et radicale individuandi principium." (*Ibid.*, II, p. 782 b 6-20).—"Quapropter signatio materiae explicanda est *per ordinem ad quantitatem ut dividentem et separantem ipsas partes materiae.*" (*Ibid.*, II, p. 784 b 34-37.)

[38] "Itaque materia signata quantitate idem est quod materia ordinata ad quantitatem ut dividentem. Quae divisio licet non fiat sine informatione quantitatis, et quantitas, ut dispositio quaedam est, dimanat a forma, tamen sub ratione dividentis praecedit in genere causae materialis ipsam formam, sicut de dispositionibus saepius dictum est, licet in genere causae formalis e converso sit." *Ibid.*, II, p. 782 b 21-31.

situation or position. Into each of these portions so diversified and distinguished in situation or position, matter can receive a diverse substantial form, thus individuating the substantial form, as well as the composite and the accidental forms which accrue to the composite. Matter, thus, is intrinsically and of its very nature ordered to unterminated quantity, and this analytically prior to the reception of substantial form. Here in this prior analytical moment, John of St. Thomas sees the principal of individuation. As ultimate and irreceivable subject, he observes, matter in this moment confers upon the composite incommunicability to others as to inferiors; [39] as intrinsically and of its very nature *ordered* to unterminated quantity (*not*, it is to be noted, as actually quantified), *matter* in this moment confers upon the composite distinction from others of the same species. Quantity, he insists, contributes to individuation as a *condition* exercising a twofold *function*. It is the *condition* which permits matter to confer its *incommunicability* upon the composite. For without quantity, matter would not be the matter of *this* composite; hence it would be unable to confer its (i. e., matter's) incommunicability upon it (i. e., upon *this* composite). At the same time it is the *condition* which permits matter to confer numerical distinction upon the composite.[40]

[39] ". . . pertinet ad materiam . . . facere incommunicabilitatem, quia pertinet ad ipsam ratio ultimi subiecti." (*Ibid.*, II, p. 783 b 9-12). ". . . materia . . . est principium incommunicabilitatis. . . ." *Ibid.*, II, p. 789 b 29-30.

[40] ". . . quantitas inter alias dispositiones non solum habet officium informandi subiectum, in quo est, dando ei formalem effectum extensionis quantitativae, sed etiam respicit ipsam [sc. materiam] ut dividentem unam portionem materiae ab alia, quo divisione posita *tamquam conditione* resultat non ex ipsa quantitate formaliter, sed ex ipsa materia *incommunicabilitas* et *distinctio* substantialis respectu materiae sic divisae; et haec est individuatio substantialis. . . . dicitur [materia] radicaliter signari, quia non per ipsam actualem informationem, quae est in composito, quod est ipsum corpus, fit. Sed per ordinem ad quantitatem ut determinantem et dividentem materiam, id est ipsa divisione subicientem formae tantum vel tantum de materia, nascitur ex ipsa materia incommunicabilitas determinata substantialis et substantialiter individuans,

This is the same as saying that matter of itself confers numerical distinction, because of itself it is *ordered* to quantity as dividing or distinguishing. Matter with intrinsic ordination to quantity can confer numerical distinction prior to its actual quantification, precisely because of this intrinsic ordination. Here is the influence of Cajetan's *praehabentia naturam quantitatis.* Whereas Cajetan insisted that matter confers numerical distinction prior to its actual quantification simply because matter by its nature *precontains* the nature of quantity, John of St. Thomas insists that matter confers numerical distinction prior to its actual quantification precisely because it is intrinsically and of its nature ordered to quantity.

We may now consider why John of St. Thomas insists that quantity cannot contribute to individuation as actually informing matter. First of all, he observes that quantity as informing, like every accident, inheres in the *composite.* Since quantity inheres *in the composite,* and not in matter, it is clear that the signing (*signatio*) of matter cannot be accomplished by quantity as actually informing.[41] Furthermore, quantity as informing cannot contribute to individuation because, like every accidental form, it itself needs *to be individuated.* As informing therefore, quantity does not individuate, but *is individuated.* As Saint Thomas teaches, he points out, no form precisely as form is individual of itself.[42] Thirdly, quantity considered as informing, like every accident, confers only accidental *esse.*

posita tamen illa divisione quantitatis *ut conditione requisita.*" *Ibid.*, II, p. 785 a 2-32.

[41] ". . . quantitas, sicut et alia accidentia, inhaerent toti composito. Ergo signatio materiae non fit per ipsam informationem quantitatis, siquidem informatio non est in ipsa materia, sed in composito. Ergo signatio materiae per aliud quam per informationem sumenda est." *Ibid.*, II, p. 783 b 29-37.

[42] ". . . ipsa quantitas in quantum informans indiget *individuari* sicut et alia accidentia. Ergo prout sic formaliter non est individuans, *sed individuata.* Nulla enim forma in quantum forma seipsa est individua, ut docet Divus Thomas. . ." Ibid., II, p. 783 b 48—p. 784 a 7.

But the numerical distinction (as well as the unity, identity, and incommunicability) of individual substantial composites is a *substantial* numerical distinction. No accidental form can contribute to this *substantial* effect.[43]

That this third reason is supremely directive of the thought of John of St. Thomas concerning individuation is quite clear. Like Cajetan before him, he is vitally concerned with preserving the substantial (the *per se* substantial) oneness or unity of the numerically distinct composite. He points out that matter can be said to be signed or designated (*esse signatam*) in two ways. In one way, its designation (*signatio*) is in the line of sensible manifestation to human observers. There is no doubt that this designation of matter is accomplished by quantity, together with the other accidents, *as informing the composite*. For these render the composite, hence the matter through it, sensible. In the second way, matter's designation renders it closed in itself, incommunicable in respect of a prior matter, and numerically distinguished from the matter of other individual composites. Its intrinsic ordination to quantity as unterminated, and this analytically prior to actual quantification, hence in the line of *substance*, is the same as matter's designation in this second way. We are not concerned here, John of St. Thomas points out, with the designation of matter taken in the first way. For this designation is that of the collection of accidents, which cannot be the principle of *substantial* individuation, as St. Thomas observes.[44] We speak here of

[43] ". . . quantitas et reliqua accidentia ratione informationis solum dant esse accidentale. Sed individua non solum quantum ad unitatem, quam habent in se, sed etiam quantum ad distinctionem ab alio substantialiter se habent, differunt enim differentiis individualibus, quae sunt intra genus et lineam substantiae, quia individua substantiae ad praedicamentum substantiae pertinent. Ergo non potest praeberi iste effectus ab aliqua forma accidentali, quia non solum ratione constitutivi, sed etiam ratione distinctivi duo individua substantiae substantialiter distinguuntur." *Ibid.*, II p. 784 a 8-24.

[44] "Et sic infert [S. Thomas] quod collectio accidentium non est principium individuationis ut quidam dicunt, sed materia designata." *Ibid.*, II, p. 784 b 1-5.

designation in the second way; [45] for matter so designated is the *substantial* principle which alone is the adequate root of *substantial* individuation.

The *Materia Signata* of Cajetan

The considerations made in the present study taken in conjunction with certain considerations of a previous study [46] make it clear that the *materia signata* of Cajetan is not that of Saint Thomas. For Saint Thomas, the *materia signata* of the *De Ente et Essentia* is an existing matter under actual determined dimensions. Precisely as *signata*, i. e., as under actual determined dimensions or as determined to the here and now,[47] *materia signata* is the principle of individuation in respect of that characteristic of the bodily individual nature which is peculiar to it

[45] ". . . in materia ly 'esse signatam' potest dicere duo: Uno modo id, quod est esse notatam et designatam, quod pertinet quasi ad manifestationem et apparentiam designationis erga nos. Alio modo ly signata est idem quod clausa et incommunicabilis reddita, etiam respectu alterius materiae et individui; et hoc supponit separationem et divisionem ab alio cum reclusione in se. Et primo modo non est dubium materiam signari ipsa quantitate ut informante et reliquis accidentibus. Haec enim reddunt nobis materiam sensibilem et designabilem. Sed non loquimur in hoc sensu in praesenti, sed de ipsa individuatione *substantiali* loquimur." *Ibid.*, II, p. 783 a 16-33.

[46] See "Dimensions in the Individuation of Bodily Substances," *art. cit.*, 71-79.

[47] A *quid signatum*, it is important to bear in mind, is that which is determined to the here and now, to here-and-now sensibility. Consequently it is something which cannot be defined, but only pointed to with the finger. Father Roland-Gosselin writes: "Le terme *signatum* est en effet d'un emploi très fréquent sous la plume du traducteur d'Avicenne et il pourrait bien être l'une des caracteristiques de son vocabulaire. Sous ces différents formes: *signatum, designatum; signatio, assignatio, designatio; signare, designare*, il revient avec insistance dans la *Sufficientia* et surtout dans la *Métaphysique*. Le sens primitif est celui de désigner, montrer, et son application première est d'exprimer cette manière indispensable d'attirer l'attention de l'esprit sur la réalité individuelle qui échappe à la définition. Il est l'équivalent de l'article démonstratif employé, dans ce cas précis, par Aristote." (*Le "De Ente et Essentia" de S. Thomas d'Aquin*, p. 59.) Cf. *Ibid.*, p. 11, note 1.

as a part of the material and sensible universe. As *signata*, it is the principle of individuation in respect of determination to the here and now, to here-and-now sensibility, hence to indefinability and denotability by the finger. Cajetan appears to have failed to see this. For according to him, the *materia signata* of Saint Thomas, and this precisely as *signata*, is that principle which accounts at once for incommunicability to others as to inferiors and for numerical distinction [47a] (this presupposing, analytically, numerical unity and numerical identity). It is not surprising, in view of this, that *materia signata*, for Cajetan, taken precisely as *signata*, is not matter precisely as determined to the here and now. For him, *materia signata*, taken precisely as *signata*, is matter with the vitality to confer incommunicability to others as to inferiors, and numerical distinction. In the commentary on the *De Ente et Essentia*, *materia signata*, precisely as *signata*, is *materia capax hujus quantitatis ita quod non illius*. In the commentary on the first part of the *Summa Theologiae*, it became *materia ut radix quantitatis* or *materia praehabens quantitatem*.

Retaining the phrase of Saint Thomas, *materia signata*, Cajetan gives it a wholly new meaning, and plants thereby the seed of a confusion which has lived and grown into the present day. Even today the principle of individuation *in respect of numerical distinction* (presupposing, analytically, numerical

[47a] *Materia signata*, and not *materia non signata*, is indeed for Saint Thomas that which accounts for incommunicability to others as to inferiors and for numerical distinction. But this is simply to say that *existing* matter, not matter *as known*, is the principle of individuation. It is not to say that *materia signata* precisely as *signata*, i. e., as under actual determined dimensions or as determined to the here and now, is what accounts for incommunicability to others as to inferiors and for numerical distinction. Because the matter of *materia signata* is that which of its nature has the *ratio* of first irreceivable subject, *materia signata* accounts for incommunicability to others as to inferiors. See: "Dimensions in the Individuation of Bodily Substances," *art. cit.*, 75-78. Because of its division, *materia signata* accounts for numerical distinction. See *De Ente et Essentia*, ed. Roland-Gosselin, p. 33, lines 29-32; p. 42, lines 6-12.

unity and identity), the most obvious and striking characteristic of the bodily individual (incommunicability to others as to inferiors is quite often not mentioned at all), is said to be *materia signata.*[48] But, it is pointed out, following Cajetan,

[48] Or *materia signata quantitate*, as it appears in John of St. Thomas. See below, pp. 151-152.

For example: ". . . d'où vient en dernier lieu *la distinction réelle et purement numérique que nous constatons entre les individus de même espèce*? . . . Pour saint Thomas, le principe d'individuation dans les êtres corporels est la matière quantifiée, *materia signata*." D. Nys, *Cosmologie, ou Étude philosophique du monde inorganique*, II, pp. 171-172.—". . . the [*numerical*] *distinction* of corporeal things is due to *materia signata*, . . ." S. J. Curtis, *A Short History of Western Philosophy in the Middle Ages*, p. 149.—Even the eleventh of the *Twenty-four Fundamental Thomistic Theses* manifests this confusion: "THESE XI.—'Quantitate signata materia principium est individuationis, *id est numericae distinctionis* (quae in puris spiritibus esse non potest) *unius individui ab alio in eadem natura specifica.*'" See R. P. Édouard Hugon, O. P., *Les Vingt-quatre Thèses Thomistes*, p. 71. (In Father Mattiussi's *Le XXIV Tesi della Filosofia di S. Tommaso d'Aquino approvate dalla S. Congregazione degli Studi*, p. 76, the eleventh thesis has *spiritibus* for the *spiribus* appearing in Fr. Hugon).—*Cf.* Aimé Forest, *La Structure Métaphysique du Concret selon Saint Thomas d'Aquin*, pp. 236-238; Joseph Gredt, O. S. B., *Elementa Philosophiae Aristotelico-Thomisticae*, vol. 1, pp. 295-296; E. Hugueny, O. P., "Résurrection et identité corporelle," *Revue des Sciences Philosophiques et Théologiques*, XXIII (1934), 99-101; George J. McMorrow, *A Metaphysical Study on the Individual and the Person*, pp. 47-58; Henri Renard, S. J., *The Philosophy of Being*, pp. 216-218; Robert Joseph Slavin, O. P., *The Philosophical Basis of Individual Differences according to Saint Thomas Aquinas*, pp. 53-72; G. M. Manser, O. P., *Das Wesen des Thomismus*, pp. 672-690.

In his commentary on the eleventh of the *Twenty-four Fundamental Thomistic Theses*, Fr. Mattiussi writes: "E ben disse l'Angelico perpetuamente che *la distinzione numerica viene dalla materia segnata*, non *altrimenti segnata che per la quantità*. . . . Or questo appunto è quello che si ricerca ove trattasi d'individuazione: non si suppone diversità di forma, ma sola moltiplicazione numerica, e si vuol sapere come in una stessa natura sieno moltiplicabili molti individui, e come l'uno dall'altro si possa ancora discernere. . . . [la] ragione di moltiplicabilità e principio d'individuazione in una stessa natura è la *materia segnata dalla quantità*." Guido Mattiussi, S. J., *Le XXIV Tesi della Filosofia di S. Tommaso d'Aquino approvate dalla S. Congregazione degli Studi*, pp. 87-88.—Although the *signatio* of matter for Fr. Mattiussi, as for Cajetan, renders matter capable of conferring numerical distinction, its *signatio* is *not* matter's *particularized capacity* for *this quantity*, or its radical precon-

that the problem is to understand properly the *signatio* of matter, that whereby *materia signata* is rendered *signata, that whereby matter is rendered capable of conferring numerical distinction.*[49] To be sure, to seek and to uncover that which

taining of the nature of quantity. For him the *signatio* is effected by *actual quantity* (inhering in the *composite*) claiming *situs* or *positio* (*vide infra*, the following note, note 49, the text quoted in "d"; see also in their entirety pp. 86-90 of his excellent commentary on the eleventh thesis). Thus, though its formulation bears the influence of Cajetan, Fr. Mattiussi's principle of individuation *in respect of numerical distinction* is one with that of Saint Thomas *in its intelligible content.*

". . . in una specie corporum non exsistit solum unum corpus: sunt plures lapides, plures rosae, plures canes, plures homines. Plures sunt numero, quantumvis eiusdem speciei. Quibus principiis unum corpus distinguitur ab alio corpore eiusdem speciei? Quid facit ut plura possint esse corpora eamdem naturam habentia? Haec est quaestio *de principio individuationis*, ... Individuum est 'quod est in se indistinctum, ab aliis vero distinctum.' Principium igitur individuationis dicendum est quo unumquodque corpus est in se indistinctum et ab aliis distinctum. . . . S. THOMAS docet *materiam* esse principium individuationis, non quomodolibet acceptam, sed *quantitate signatam.*" Charles Boyer, S. J., *Cursus Philosophiae*, I, pp. 481-483.—Although its formulation manifests the influence of Cajetan, Fr. Boyer's principle of individuation *in respect of numerical distinction* is one with that of Saint Thomas *in its intelligible content* (see following note, note 49, the text quoted in "e").—*Cf.* Father Giacon, *La Seconda Scolastica*, II, p. 21, note 1.

Father Degl'Innocenti, too, by far the most profound among present-day students of the problem of individuation in Saint Thomas, manifests this influence (see the following note, note 49, the texts quoted in "a").

[49] For example: a) "La ragione quindi della moltiplicazione [puramente numerica dell'essenza specifica] andrà cercata nella materia e nella quantità, ossia nella materia 'signata quantitate,' come si dice con frase tecnica. Ma in che consiste questa *signatio*? Qui sta il punto." Umberto Degl'Innocenti, O. P., "Il principio d'individuazione e Giovanni Capreolo nel V centenario della sua morte," *Acta Pont. Academiae Romanae S. Thomae Aq. et Religionis Catholicae*, X (1945), 150.—"Itaque ratio multiplicationis [i. e., of the purely numerical multiplication of a same specific nature] quaerenda erit in quantitate et materia seu in materia 'signata quantitate' ut thomistice dicitur. Sed in quo praecise consistit *signatio*? Hic iacet lepus." (Umberto Degl'Innocenti, O. P., "Animadversiones in Caietani doctrinam de corporum individuatione," *Divus Thomas*, LI (Piacenza, 1948), 21.—See also Father Degl'Innocenti's study on individuation in Saint Thomas: "Il pensiero di San Tommaso sul principio d'individuazione," *Divus Thomas*, XLV (Piacenza, 1942), 81.

b) Father Gredt shows concern about the proper understanding of the

renders matter capable of conferring numerical distinction is a legitimate and integral part of the investigation of the problem of individuation. This is not the confusion introduced by Cajetan. Rather it is this. His great influence as the foremost

signatio of matter, when he writes: "Contra Thomistas aliquos, qui hanc *signationem* quantitatis ex quantitate actu informante et inhaerente repetunt . . . , dicimus eam [sc. *signationem*] in connotatione seu relatione transcendentali materiae ad quantitatem interminatam consistere." Joseph Gredt, O. S. B., *Elementa Philosophiae Aristotelico-Thomisticae*, I, p. 296.

c) "Saint Thomas a de bonne heure admis que la solution au problème général de l'individuation devait se trouver dans l'étude des rapports de la matière à la quantité, et c'est là ce qu'il exprime par l'expression classique: *materia quantitate signata. Mais il reste à savoir en quoi consistent au juste ces rapports:* comment la quantité peut-elle jouer effectivement le rôle auquel son essence, prise abstraitement, nous permet de la considérer disposée et qui est d'introduire la distinction [numérique] dans la matière?" Aimé Forest, *La Structure Métaphysique du Concret selon Saint Thomas d'Aquin*, pp. 237-238.

d) Fr. Mattiussi, too, is concerned about the correct understanding of the *signatio*: "E ben disse l'Angelico perpetuamente che la distinzione numerica viene dalla materia segnata, *non altrimenti segnata che per la quantità . . . avente per sè posizione, et costituente diversamente posto il proprio soggetto.*" Guido Mattiussi, S. J., *Le XXIV Tesi della Filosofia di S. Tommaso d'Aquino approvate dalla S. Congregazione degli Studi*, pp. 87-89.

e) "S. THOMAS docet materiam esse principium individuationis, non quomodolibet acceptam, sed *quantitate signatam*. Eodem modo omnes thomistae loquuntur; sed duplex praesertim vulgatur interpretatio doctrinae. Alii, duce CAIETANO, dicunt materia signata quantitate significari materiam *quatenus in potentia receptiva huius quantitatis, antequam actu sit quanta*. Ita hodie REMER, GREDT, etc.—Alii, cum FERRARIENSI intelligunt materiam quantitate signatam *quatenus in actu* habet quantitatem, vel *actu* subest dimensionibus, [see following footnote]. . . . . Haec altera interpretatio conformior textibus S. THOMAE nobis esse videtur. . . . Thesis XIII. MATERIA EST PRINCIPIUM INDIVIDUATIONIS IN SUBSTANTIIS COMPOSITIS, NON QUIDEM UT SIC, SED PROUT QUANTITATE *SIGNATUR*, SEU PROUT SUBEST DIMENSIONIBUS INTERMINATIS." Charles Boyer, S. J., *Cursus Philosophiae*, I, pp. 483-484.

f) "Das ist . . . der Grund, warum Thomas das Individuationsprinzip in die Materie, und zwar in eine irgendwie *bestimmte*, in eine 'materia signata' verlegt. Aber in welchem Sinne? Das ist die Hauptfrage, die wir jetzt Punkt für Punkt näher bestimmen möchten." G. M. Manser, O. P., *Das Wesen des Thomismus*, p. 680.—*Cf.* by the same author: "Das Thomistische Individuationsprinzip," *Divus Thomas*, XII (Freiburg, 1934),

of the commentators on Saint Thomas has led students of Saint Thomas to seek in his (i. e., that of Saint Thomas) *materia signata*, precisely as *signata* or determined to the here and now, that which renders matter capable of conferring numerical distinction. To find this in the *materia signata* of Saint Thomas, taken precisely as *signata*, is not possible. Saint Thomas never offered his *materia signata*, precisely as *signata*, as the principle of individuation in respect of any characteristic of the bodily individual but one—that which is peculiar to it as a part of the material and sensible universe. It may well be that this confusion is the root of another confusion: the difficulty of determined dimensions vs. unterminated dimensions in the writings of Saint Thomas. For, if *materia signata*, precisely as *signata*, i. e., precisely as under *determined* dimensions, is the principle of individuation in respect of numerical distincton (this is the confusion introduced by Cajetan), how can matter under *unterminated* dimensions be the principle of individuation in respect of this same characteristic?

For John of St. Thomas the formula *materia signata* (the term *signata* bearing with it the new meaning introduced by Cajetan) takes on a third word and becomes *materia signata quantitate*.[50] The *materia signata* of Saint Thomas may be con-

230.—See also Robert Joseph Slavin, O. P., *The Philosophical Basis for Individual Differences according to Saint Thomas Aquinas*, p. 63: ". . . St. Thomas places the principle of individuation in matter, moreover, in an 'assigned' matter, *materia signata*. The sense of the term is the principle question which we shall now attempt to discover."

Also see by the present writer: "La doctrine de saint Thomas sur l'individuation des substances corporelles," *Revue Philosophique de Louvain* LI (1953) 39-41.

[50] "Quid sit *materia signata quantitate*, quae est principium individuans? Expressa D. Thomae sententia est innumeris locis *materiam quantitate signatam* esse primum principium individuationis" John of St. Thomas, *Curs. Phil.*, ed. B. Reiser (Turin, 1930), II, p. 781 a 17-25).

For Sylvester of Ferrara (1474-1528), too, the formula *materia signata* (the term *signata* bearing with it the new meaning introduced by his contemporary, Cajetan (1469-1534) took on a third word and became *materia quantitate signata*: "Unde, sicut duo conveniunt individuo, scilicet incom-

sidered shorthand for the longer phrase, *materia signata quantitate*, used by John of St. Thomas, provided it is correctly understood as "materia signata quantitate *determinata*." It does not have this meaning for John of St. Thomas. For him it means "materia signata quantitate *interminata*," the term *signata* taking on the new meaning given to it by Cajetan. The *signatio* of matter, in John of St. Thomas as in Cajetan, is that which renders matter capable of conferring incommunicability to others as to inferiors and, numerical distinction. Its *signatio*, or that which renders *materia signata signata*, is, for John of St. Thomas, matter's intrinsic ordination to quantity as unterminated, and this analytically prior to actual quantification, hence in the line of substance. *Materia signata*, so understood, is for John of St. Thomas the principle of numerical distinction and of incommunicability to others as to inferiors.

John of St. Thomas speaks of another mode of the designation (*signatio*) of matter—its designation in the line of sensible manifestation to human observers.[51] There is no doubt, he observes, that this designation of matter is accomplished by quantity *together with the other accidents actually inhering in the composite*, i. e., by what Saint Thomas calls here-and-now *determined* dimensions. For these accidents render matter sensible. But matter so designated, he observes, cannot be the

municabilitas et distinctio, ita *materia signata*, quae principium individuationis est, duo includit, ipsam scilicet materiam incommunicabilem, et quantitatem, ad quam primo materialis distinctio pertinet; ita quod nec materia sola individuat nec sola quantitas, sed *materia quantitate signata* et limitata est illa quae individuat, ratione materiae dans incommunicabilitatem, ratione vero determinationis suae per quantitatem numeraliter distinguens." *In I C. G.*, ch. 21, IV.—But, though its formulation bears the influence of Cajetan, Sylvester of Ferrara's principle of individuation in respect of *numerical distinction and incommunicability to others as to inferiors* is one with that of Saint Thomas *in its intelligible content and vitality*.

John Capreolus does not manifest this influence of Cajetan; he (1380-1444) precedes Cajetan (1469-1534).

[51] See above, pp. 145-46, for the two ways in which matter can be said to be signed or designated according to John of St. Thomas.

principle of the numerical distinction and of the incommunicability (to others as to inferiors) of the composite *substance*. His observation is wholly in agreement with Saint Thomas. For Saint Thomas never offered his *materia signata*, precisely as *signata* (this is one with what John of St. Thomas calls matter as designated in the line of sensible manifestation to human observers), as the principle which accounts for *substantial* incommunicability and for *substantial* numerical distinction. What is not in agreement with Saint Thomas is this: for John of St. Thomas there are two modes of the designation of matter, one of them born of Cajetan. Under the influence of Cajetan, John of St. Thomas appears to have failed to see that there is but one mode of *signatio* for Saint Thomas, that mode which renders matter capable of conferring upon the bodily individual, determination to the here and now, to here-and-now sensibility, hence to indefinability, to denotability by the finger.

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The Active Theory of Sensation in St. Augustine

by Sister Mary Ann Ida Gannon, B.V.M.

THE WEAKNESS or the strength of the basic principles in any system is often best illustrated in the question of man's relation to the external world. Therefore, a study of the theory of sensation of St. Augustine has an important reference to his philosophical system and the influence which it exerted on later thought. There have been few studies of this subject. Ott, in his monograph on sensation in Augustine [1] makes many references to passages which show Plotinian influences. In an article on sensation in Plotinus, Clark states that this theory is part of Augustine's borrowings,[2] and Gilson, when referring to certain similarities in the two theories notes that Augustine reinterprets Plotinus.[3]

This brief study of the theory will consider the development of Augustine's thought from his early to his later works, list the various uses of the term *sensus*, and suggest some points of comparison and contrast between Plotinus and Augustine.

[1] W. Ott, "Des hl. Augustinus Lehre uber die Sinneserkenntnis," *Philosophisches Jahrbuch*, XIII (1900) 45-59; 138-148.

[2] G. H. Clark, "Plotinus' Theory of Sensation," *Philosophical Review*, LI (1942) 357.

[3] E. Gilson, *Introduction à l'étude de saint Augustin* (Paris, 1949), p. 76. Gilson suggests several parallels: the use of "non latet," the similar treatment of pain, the active role of the soul in the sense process. Pierre Courcelle *Recherches sur les Confessions de saint Augustin* (Paris, E. Boecard, 1950) indicates the possibility of an unsuspected influence of St. Ambrose on St. Augustine. The present writer has noted further parallels including a description of memory very similar to a passage in the *Confessions* (X, 14, 22): ". . . ita et nos de nostrae memoriae promamus." *Exp. de Ps.* VII, 25 (P. L. 15, 1357).

From the Dialogues to the Confessions

In the early works, Augustine stresses the superiority of the soul over the body, the pleasure-pain aspect of sense, and the manner in which concentration on the body and its needs turns the soul from seeking truth.[4] The *De Ordine* defines man as a rational, mortal animal and establishes certain principles which are reiterated in later works: 1) It is the soul which senses; 2) *sensus* and cognition *per sensus* are two different operations. In the former, pleasure naturally occurs when the eye is delighted with light or color and the ear with sounds. In the latter, there are two levels: the pleasure experienced by the rational soul in its discernment of the order and harmony in sights or sounds, and a higher activity in which those passions are used as messengers to carry a meaning imposed on them by the soul. 3) Unity is the end of the soul's activity. This is manifest on a lower level in the passions—pain indicates a separation of parts, pleasure, a union. Man must not rest in the satisfaction which physical well-being causes, nor permit such pleasure to turn him from his proper search for true unity.[5]

That the soul is wholly in every part of the body is defended in *De Immortalitate Animae* and *De Quantitate Animae* and explained, as in Plotinus, by the soul's knowledge and localization of pain.[6] The explanation in the latter work involves a detailed consideration of *sensus* as a " passion of the body which does not in itself escape the notice of the soul." In brutes, the act of awareness is directed to activity alone, but in man it can

[4] *Soliloquia* I, 14, 24, P. L. 32, 882; I, 4, 9, col. 874; *Contra Academicos* II, 1, 2, P. L. 32, 920; III, 11, 16, col. 948; *Epist.* III, 4, P. L. 33, 65.

[5] *De ordine* II, 11, 31, 34, P. L. 32, 996, 1011; II, 18, 48, col. 1017; II, 15, 43, col. 1019.

[6] *De immortalitate animae* 16, 25, P. L. 32, 1034; *De quantitate animae* 30, 59, P. L. 32, 1068; 32, 65-67, col. 1071-72. The two analogies which Augustine suggests in the latter work are not satisfactory and show that he had not yet clearly grasped an explanation of the soul's presence to the body.

be directed to a higher end, *scientia.*[7] On the lowest level of its activity, the soul vivifies and conserves the body. On a second level, it directs the body and judges of the various sense objects that are to be sought or shunned; on this level is found the lowest type of memory: simple habit which links even brute souls to external things. The level proper to man involves a rational use of *sensus* as a means of conveying messages to the soul; sights and sounds are held to be most conducive to this end.[8]

The nature of the soul's awareness of the body's passions is discussed in the sixth book of *De Musica.* Chief among the principles enumerated is the basic principle of the active theory: the body cannot be the cause of a passion in the soul since it is inferior to it.[9] However, the body can sometimes make the operations of the soul more difficult or more easy. Meeting opposition from its own body or external bodies, the soul exercises greater attention in its usual operations and becomes aware of pain (if its acting is difficult) or of pleasure (if its action is more facile).[10] The soul's awareness of the body's passions is constituted by its awareness of its own actions against those passions. Augustine makes a clear distinction between the intention of the soul and each *motus,* which is differentiated by its function or its cause.[11] The motion (number) by which the

[7] *Ibid.*, 24, 45-30, 59, P. L. 32, 1060-1068. "Si enim sensus est corporis passio per seipsam non latens animam."

[8] *Ibid.*, 33, 70-72, col. 1073-75. In Chapter 35, *sensus* is listed among the powers of the soul: ". . . primus actus, docendi causa, dicatur animatio; secundus, sensus . . . possunt et hoc modo appellari: de corpore; per corpore . . ." col. 1079.

[9] "Sed perabsurdum est fabricatori corpori materiam quoquo modo animam subdere . . . Nullo modo igitur anima fabricatori corpori est subjecta materies . . . Aut cum hoc fatemur, poterimusne operanti corpori et numerus imponenti eam subdere; ut illud sit fabricans, haec autem materies de qua et in qua numerosum aliquid fabricetur?" *De musica* VI, 5, 8, P. L. 32, 1168.

[10] ". . . quae difficultas propter attentionem, cum eam non latet, sentire dicitur, et hoc vocatur dolor aut labor. . . ." *Ibid.*, VI, 5, 9, col. 1168.

[11] The need of turning the attention is also brought out in Plato (*Re-*

soul vivifies the body and of which it is ordinarily unaware is called *progressores*. The motion by which it counteracts the effect of a passion in the organ is called *occursores*; the soul may or may not be aware of this motion—awareness of it or of the *recordabiles* constitutes sensation.[12] The latter motion is that which remains in the soul because of the attention given to it; the *recordabiles* are often not in the consciousness but the soul can turn its attention to them or recall them. They are identified with *phantasia* later in the dialogue.[13] A certain

public VII, 518-19) and Plotinus. The latter holds that the world soul does not sense because it does not turn its attention to its body (*Ennead* IV.4.25); that certain activities such as growth, nourishment, health are not usually noticed by the soul (I.4.9-10); that a man with his attention turned to intelligible things may pass familiar objects without being aware of them (IV.4.8).

[12] The *progressores* involve a vital motion which the soul carries on quietly; in healthy bodies this does not attract attention (*De musica* VI, 5, 10-15, col. 1169-71). *Occursores* may escape the awareness of the soul (VI, 8, 21, col. 1169-71) but when the soul is aware of its own acts in this regard it senses and needs for this process the *recordabiles* which account for the duration of the experience (VI, 5, 9-11, col. 1168-9; 8, 21-2, col. 1174-5). Actually, what seems to be known is the *recordabiles*.

The treatment of *motus* throughout this book is reminiscent of passages in the *Timaeus*. Thus: sensations and pain and pleasure result from violent affections (42 b); motions which "impinge" on the soul because of the action of an external body are termed "aisthesis" and resemble the corporeal numbers of *De musica* (43 c); the soul judges of external objects by means of its own revolutions—the Same and the Other (44 ad); the naturally mobile when impressed by a small affection transmits the impression until it reaches *to phronomin*; bones and hair, lacking a mobile substance can't transmit such affections (64 ad); intense affections are painful (64 e); images are left in the soul when some "greater motions are left behind" (45 e). For Plato, the soul is a self-mover (*Phaedrus* 245 cd); and perceives through the senses, its instruments (*Theaetetus* 184 cd).

[13] "Recurrit autem in cogitationem occasione similium motus animi non exstinctus, et haec est quae dicitur recordatio." (VI, 8, 22, col. 1175.) "Motus igitur animae servans impetum suum, et nondum exstinctus, in memoria esse dicitur, et revera minor fit, nisi antequam intercidat, quadam similium vicinitate renovetur." (VI, 5, 14, col. 1171; VI, 3, 4, col. 1165). "Haec igitur memoria quaecumque de motibus tenet, qui adversus passiones corporis acti sunt, *phantasiai* graece vocatur." (VI, 11, 32, col. 1180.)

natural motion which Augustine cannot adequately explain governs the regularity of the heart beat, respiration, etc. and is called *sensuales*; by it the soul judges the pleasant or unpleasant with a kind of spontaneous judgment which may, however, be affected by custom.[14] The highest motion of the soul, proper to reason, is called judicial and is the means by which all other actions are appraised in the light of eternal truths. In every motion the soul seeks a kind of equality or order, but true equality is only found when it turns from lower things to God. Thus, the wise man uses all of the movements of the soul not out of idle curiosity but for the utility of his body and his neighbor.[15]

The *De Genesi ad contra Manichaeos* repeats the warning that the wise man is the one who employs useful creatures properly, avoids harmful ones, and gives up those that are superfluous.[16] As an adult, he is no longer ruled by the judgments of sense, but subjects all activity to the rule of reason.[17] This domination of life by reason as contrasted to the disordered life in which sense is supreme, is also described in *De Libero Arbi-*

[14] "Nisi arbitrarer dum illa tractamus, nescio unde apparuisse nobis quintum genus, quod est in ipso naturali judicio sentiendi, cum delectamur parilitate numerorum, vel cum in eis peccatur, offendimur . . . quasi quodam naturali jure ferre sententiam." (VI, 4, 5, col. 1165; VI, 7, 17-8, 20, col. 1172-73; VI, 13, 38, col. 1184).

[15] "Sed animadvertere te opus est, et in progressoribus eadem animam corpus movere vel ad corpus moveri; et in occursoribus hanc eadem passionibus ejus ire obviam; et in recordabilibus istam ipsam, donec quodammodo detumescant, ipsis quasi fluctuare motionibus. Nos ergo in istis generibus numerandis et distinguendis unius naturae, id est, animae motus affectionesque discipimus . . . recte etiam videri potest ratio, quae huic delectationi super imponitur, nullo modo sine quibusdam numeris vivavioribus, de numeris quos infra se habet posse judicare." (IV, 9, 24, col. 1176-77; VI, 14, 43-15, 49, col. 1186-89). For a detailed analysis of the pertinent passages in Book VI see Gilson (*op. cit.*, pp. 73-87) and Elizabeth Salmon ("The Nature of Man in St. Augustine's Thought," *Proceedings American Catholic Philosophical Association* XXV [1950] 26-30).

[16] *Ibid.*, I, 16, 26, P. L. 34, 185; I, 21, 32, col. 188.

[17] *Ibid.*, I, 20, 31, P. L. 34, 188. See also *De moribus eccl. Cath.* I, 20, 37, P. L. 32, 1327, and *De diversis quaest.* 64, 7, P. L. 40, 57.

trio. Here, again, the importance of the seeking of pleasure and of the fleeing from harm on the level of sense operations is brought out.[18]

It is in this latter work that Augustine stresses the objectivity of sense, enumerating the traditional objects of each sense. He argues to the necessity of an interior sense which judges the exterior senses and moves them to seek or flee from the external object. Whereas the exterior sense judges the passions of the body, the interior sense judges the act of the soul in reference to these passions. Once more, Augustine establishes a hierarchy of judgments: 1) sense itself judges the impression on the body; 2) interior sense judges the presence or absence of sensation and determines whether the experience is to be prolonged or shunned; 3) the judgment of reason dominates all beneath it.[19]

Another group of early works is concerned with the relationship of *sensus* to knowledge rather than with the affective aspects of the experience. The norm of comparison is not pleasure-pain reaction but the objects sought by the soul: the mutable things of sense *versus* the immutable truths of the intellect. *Letter VII* contrasts the knowledge which requires images and that which has a permanent object for which no image is necessary.[20] *De Magistro* contrasts what comes to the soul through the senses to what is always present to the soul

[18] *De libero arbitrio* II, 13, 35, P. L. 32, 1260; II, 3, 7-9, col. 1243-45; II, 6, 13, col. 1248.

[19] *Ibid.*, II, 3, 8; 6, 13, col. 1244-1248. This interior sense as it is spoken of here, to which all the exterior senses refer, has much in common with the "numbers" by which sense judgments are made in *De musica.* In the latter work the numbers are not given a definite location although they are excluded from the senses and are shown to be related to the memory (which has no organ). Like those numbers, the interior sense moves the animal to act in seeking or repelling the object sensed. This interior sense does not reappear in later writings of Augustine; "interior sense" is ordinarily used to refer to intellect or reason and is not found in brutes.

[20] *Ep. VII*, 2, 4, P. L. 33, 69.

and also presents Augustine's rejection of the theory of reminiscence.[21] In *De Vera Religione* and *Letter XVIII*, the mutable objects of sense and the immutability of intellectual truth are contrasted, and the soul is warned to turn from changeable bodies to seek the true beatitude which is found only in eternal truth.[22]

Both aspects of *sensus* are found in the *Confessions*. Augustine treats of the delights of the flesh at great length and warns man against becoming entangled in them. He also warns him against the illicit curiosity which seeks to use changeable things as ends rather than as means to a higher knowledge.[23] Although he stresses the need to renounce the messengers of the body in order to reach eternal truth, Augustine writes some beautiful passages in praise of memory which contains not only intelligible things but also the images of corporeal ones.[24]

Major Works of the Later Period

The letters in the period from 400 to 417 stress the unity of man, the contrast between what is attained through the senses and what is known by the mind, the necessity of utilizing the mind in order to attain *scientia*, and the role of reason in judging the senses.[25] *In Joannis Evangelium* returns to the role of the soul in using the pleasure and pain accompanying sense experience, while both *De Trinitate* and *De Genesi ad Litteram* are primarily concerned with knowledge *per sensus*.

During this period, Augustine commonly refers to the soul as being in the body as in a habitation.[26] *In Joannis Evan-*

[21] *De magistro* 11, 38, P. L. 32, 1216.

[22] *Ep. XVIII*, 2, P. L. 33, 85; *De vera religione* 10, 18, P. L. 34, 130; 3, 3-4, col. 124-6; 29, 52, col. 145; 30, 55, col. 146.

[23] *Confessionum* X, 30-34, P. L. 32, 796-801; 35, 55, col. 802.

[24] *Ibid.*, X, 8, 12-17, 26, col. 784-90.

[25] *Ep. CXXXVII*, 3, 11, P. L. 33, 520; 2, 5, col. 517; *Ep. CXLVII*, 17, 41, P. L. 33, 615; 3, 8, col. 600; 16, 38, col. 613.

[26] *In Joan. Ev.* VIII, 2, 2, P. L. 35, 1451; *Ser. CXXVI*, 2, 3, P. L. 38, 699; *Ser. LII*, 7, 18, 361; *Ser. LXVI*, 4, 5, col. 428; *Ser. CCXLI*, 2, 2, col. 1134.

gelium refers to the manner in which, while operating in the body, it keeps it from disintegration and corruption and gives to each member of the body such powers as are necessary for the well being of the whole.[27] The "heart"[28] is the center to which the senses announce their objects; it judges between the good and the bad, the just and the unjust. In the twentieth treatise, Augustine marvels at the influence which the soul exerts on the body, commanding it as a master a slave.[29] As in the *De Genesi contra Manichaeos*, he states that the rule by sense is permissible only in one who has not yet attained the use of reason. To live a life in which judgments are based on the pain-pleasure reactions of sense is to remain on the level of brutes. The good man forms his judgments by looking to eternal truths. Throughout this treatment there is no reference to cognition *per sensus*.[30]

Book XI of *De Trinitate* is largely concerned with what is known through sensation. The trinity of the external man is constituted by the external object, *visio* and *intentio*. The external object, separate from the sensor, cannot of itself cause sensation. *Visio*, the sense informed, is the result of the union of sense and the external object. *Intentio* is the act of the soul which directs the sense to the object; this power is so strong that it can even affect other parts of the body.[31]

[27] *In Joan. Ev.* XIX, 5, 12, P. L. 35, 1550; XIV, 3, 10, col. 1509; XVIII, 5, 9, col. 1541.

[28] *Ibid.*, XXVII, 8, 4, col. 1671. This thought recurs frequently in Augustine's sermons, for example: *Ser. XXVIII*, 4-5, P. L. 38, 184-5. His best explanation of his use of "heart" is given in *De anima et ejus origine*: "non hoc dici ab illa particula carnis nostrae quae sub costis latet; sed de illa vi qua cogitationes fiunt; quae merito appellatur hoc nomine, quia sicut motus non cessat in corde, unde se pulsus diffundat usquequaque venarum, ita non quiescimus aliquid cogitando versare." IV, 6, 7, P. L. 44, 528.

[29] *Ibid.*, XX, 5, 10, col. 1561.

[30] *Ibid.*, XV, 4, 21, col. 1517-8.

[31] *De Trinitate* XI, 2, 2, P. L. 42, 985-6; 2, 5, col. 987-8. Augustine had used the story of Jacob's flock to illustrate the influence of the soul on the

A second trinity, composed of the form in the sense, memory, and *intentio* is a step toward the trinity of the interior man, or internal vision: the form in the memory, the eye of the soul, *intentio* or will. Here, again, *intentio* moves the soul towards its object which is now the image in the memory.[32] It may be possible to have external vision without internal vision, as in the case of a man's walking down a familiar street, avoiding obstacles and yet retaining no memory of what has passed.[33] Internal vision may also take place without external vision when, in the absence of the object, it is focused on the image in the soul.

This analysis does not exactly parallel the one in *De Musica*, and makes no mention of the act of the soul by which an image is formed as a result of the passion in the body (the *occursores* of Book VI). However, this latter activity is stressed in *De Genesi ad Litteram*, a contemporaneous work, so it is clear that in the present case Augustine has selected only those elements which illustrate the point at issue and has ignored what seemed irrelevant to it. He does refer to the fact that pleasure may be used as a means but man must be careful to direct all of his activities to their proper end, the contemplation of truth.[34]

De Genesi ad Litteram gives a detailed physiological treatment of the sense. Following the current medical theories, Augustine links the four elements and the five senses. The soul itself senses but uses as its instruments the most active elements of fire and air. Some of the latter is diffused through-

body in Book III (8, 15, col. 877), and in *Contra Jul. Haer. Pel.* he uses it to illustrate the mysterious way in which qualities of corporeal things pass into incorporeal ones. (V, 14, 51, P. L. 44, 812.)

[32] *Ibid.*, XI, 3, 6, col. 988-9.

[33] *Ibid.*, XI, 8, 15, col. 996. In this passage, Augustine distinguishes an experience in which an object is merely seen, from one in which it is seen and remembered. The first is a case of limited awareness on the part of the soul which, according to *De musica* (VI, 15, 49) is good for the soul since it does not distract it from its interior occupation.

[34] *Ibid.*, XII, 9, 14, col. 1005; 12 ,17, col. 1007.

out the flesh and passes through the veins from the heart. The fire in the brain is the source of the visual ray and of the other rays which pass through tubes to each sense. The senses and memory are localized in the brain but the soul is not to be confused with either the brain or the instruments it uses.[35]

The detailed study of the three visions occurs in Book XII. In a normal experience the object is seen by the eye, an image is produced in the *spiritus* and the intellect recognizes either the sign or its signification. Thus, corporeal vision is ordered to spiritual and spiritual to intellectual, and a human experience is not complete without the three.[36]

The active theory is strongly reaffirmed: the spirit cannot submit to the influence of the body.[37] *Spiritus* is now credited with the activity by which the image of the object is formed when the organ is affected, and the marvelous celerity and ease with which this operation is accomplished fills Augustine with wonder.[38] Both the external object and the internal activity of *spiritus* are necessary if the experience is to take place. If there is an obstacle to the operation of *spiritus* in the body (as in a blind man) the attention goes as far as the door of the senses and is aware that it is not perceiving. If, however, the obstacle should be in the brain the *spiritus* may be imprisoned there and turn its attention to images which do not represent objects actually present. This unhealthy state leads to false

[35] *De Genesi ad litteram* III, 4, 6-7, 10, P. L. 34, 281-3; VII, 13, 20-15, 21 col. 362-3.

[36] *Ibid.*, XII, 11, 22, col. 462.

[37] "Neque enim corpus sentit, sed anima per corpus, quo velut nuntio utitur ad formandum in seipsa quod extrinsecus nuntiatur." *Ibid.*, XII, 24, 51, col. 475. "Nec sane putandum est facere aliquid corpus in spiritu, tanquam spiritus corpori facienti, materiae vice subdatur. Omni modo praestantior est qui facit, ea re de qua aliquid facit; neque ullo modo spiritu praestantius est corpus." *Ibid.*, XVI, 33, col. 467.

[38] "Ego vero multo amplius admiror, multoque maxime stupeo quanta celeritate ac facilitate in se anima fabricetur imagines corporum, quae per corporis oculos viderit, quam somnantium vel etiam in ecstasi visiones." *Ibid.*, XII, 18, 40, col. 470.

judgments in which external objects and the image may be confused. Sometimes, the soul itself may become so absorbed in other activities that it is unaware of the presence of the object.[39]

In general, *spiritus* is a certain power of the soul, inferior to *mens*, wherein the likenesses of corporeal objects are produced.[40] It has five types of activities among which are the forming and storing of images, the recall of the images of past experiences under the direction of the will, and the visions caused by disturbance in the body or by other spirits which are not controlled by the will. In any case, the image produced by *spiritus* is of a more excellent nature than the body, and can be distinguished by the healthy man from the external object which it represents.

In Book VIII of this same work, Augustine touches another question which puzzled him; the nature of the union of soul and body. He denies that the soul is present in a local manner as water in a sponge, and suggests that it is present by a kind of incorporeal impulse or vital attention.[41] Here and in later works he echoes an explanation of St. Ambrose, speaking of the soul as moved by a quasi-foot or hand—love.[42] This strengthens

[39] *Ibid.*, XII, 20, 43, col. 471; 19, 41, col. 470.

[40] *Ibid.*, XII, 9, 20, col. 461. ". . . spiritus, vis animae quaedam mente inferior, ubi corporalium rerum similitudines exprimuntur." For the various meanings of *spiritus* in Augustine's works see: G. Verbeke, *L'Evolution de la doctrine du pneuma du Stoicisme à s. Augustin.* (Paris, 1945), pp. 492-500; J. H. Taylor, "The Meaning of Spiritus in Augustine's *De Genesi* XII," *The Modern Schoolman*, XXVI (1949), 211-18.

[41] *Ibid.*, VIII, 21, 42, col. 389. Porphyry (*Sententiae* I-VI, XXVIII-IX, XXXV-XXXVIII) is also much concerned with the manner in which the incorporeal principle is present to the corporeal and adopts a similar explanation. As early as *De Moribus Eccles. Cath.* (I, 12, 21, P. L. 32, 1320) Augustine remarks that the soul is "far" from God not in place but in *affectiones*. Here and in other places he is close to St. Ambrose in expression.

[42] "Nec navibus fugiamus, aut curribus, aut equi qui abligantur et cadunt; sed fugiam animo et oculis, aut pedibus interioribus." (*De Isaac et Anima*, 8, 79, P. L. 14, 559.) Cf. Augustine: "Pes animae rectae intel-

his assertion in *De Trinitate* that man's unity is primarily one of operation. A letter of this period using a Plotinian figure, likens the mixture of soul and body to a mixture of light and air in which each retains its integrity.[43]

In *De Anima et ejus Origine*, Augustine asks many questions which he does not attempt to answer. Manifesting his interest in the opinions of the medical men of his times as well as his own awareness of the mysterious nature of the soul's vivifying activity, he asks a series of physiological questions. Of what importance are the nerves? Is the central principle the brain or the heart?[44] The tone of the discussion indicates that Augustine has not reached certainty about many phases of human activity and this attitude is frequently reflected in his later writings. He advances the power of the memory as the strongest argument for the spirituality of the soul, and this argument reappears in *Letter 147* which refers to the manner in which memory possesses the incorporeal images of corporeal things. To show that the soul's presence in the body is not a local presence, *Letters 166* and *118* refer to the activity of sensation.[45]

A return to and an interest in the pleasure-pain side of sensation is found in *Contra Julianum Haeresis Pelegianae Defensorem*. Against the Pelagians, Augustine holds that the senses are good and have an important function in man's life. All of the senses give some pleasure beyond merely carnal

ligutur amor . . . locus animae non in spatio aliquo est, quod forma occupat corporis, sed in delectatione." (*Enn in Ps.* IX, 15, P. L. 36, 124.) "Amorem hominem . . . quasi manum animae . . ." *Ser. CXXV* 7, P. L. 38, 694.

[43] *Ep. CXXXVII*, 2, 11, P. L. 33, 520.

[44] *De anima et ejus origine* IV, 5, 6, P. L. 44, 527-8; IV, 2, 3, col. 525. Ambrose held the heart/ brain theory of motion here referred to (*Hexaemeron* VI, 9, 61, P.L. 14, 283).

[45] *Ibid.*, IV, 17, 25, P. L. 44, 539; *Ep. CXLVII*, 17, 43, P. L. 33, 616; *Ep. CLXVI*, 2, 4, P. L. 33, 722; *CXVIII*, 4, 24, 27-30, col. 444-447. See also the treatment of sense and memory in proving that the soul is unextended in *Contra Epistolam Manichaei* XVI, 20, P. L. 42, 185.

pleasure, and sight and sound may even move man to praise God. Furthermore, in this life, man requires some pleasure in carrying on his activities and such enjoyment becomes illicit only when it is sought as an end instead of a means.[46] In considering the important work of caring for the body and its needs, Augustine marvels again at the way in which the form of an external body can affect the sense without leaving that body.[47] Although he has sketched a theory of sensation which aims at reconciling experience with basic principles, Augustine never claims to have given an adequate explanation of details.

There is no detailed analysis of sensation in later works. That Augustine still adheres to his active theory is clear from short references in other contexts. A typical passage in *Enarrationes in Psalmos XLI* refers to the soul as a ruler, the body as that which serves.[48] After reaffirming the fact that the soul is better than the body, he speaks of the eyes as windows through which the soul sees and adds that although he may speak in a general way of the eyes seeing it is more accurate to ascribe that action to the soul.[49]

In *De Civitate Dei*, there are also passages which indicate that Augustine still maintained that the operation of *sensus* was an act of the soul. In treating pain he holds that it is the soul, not the body which feels the hurt inflicted and adds that although we speak of living and sensitive bodies, in reality all life and sense are from the soul.[50]

[46] *Contra Jul.* IV, 14, 65, P. L. 44, 770; IV, 14, 67, col. 770. In his long treatment of health in *Sermon* 277 (IV, 4—VI, 6, P. L. 38, 1259-61) Augustine remarks that "sanitas est nihil sentire." Bodily conditions are sensed only when the body is unhealthy or when its natural infirmity impedes the soul. This echoes the principles in *De musica* VI, 10 (P. L. 32, 1169).

[47] *Ibid.*, V, 14, 51, col. 812-13.

[48] *Enn. in Ps.* XLI, 7, P. L. 36, 468; CXLV, 5, col. 1887; CXIX, 8, col. 1604.

[49] *Ibid.*, XLI, 7, col. 468.

[50] *De Civitate Dei* XXI, 3, 2, P. L. 41, 711; XIV, 15, 2, col. 424.

The validity of sense knowledge is defended in both the *De Trinitate* and *De Civitate Dei*.[51] The senses enable man to grasp the beauty of the external world and so lead him to an understanding of the eternal beauty of truth. The objects known through sense are properly judged by the mind which knows unchangeable truths. Although one can speak of knowledge of sensible things in such a theory of sensation, it is not possible to speak of sense knowledge in an Aristotelian sense for there is no knowledge on a sense level. *Sensus* in brutes is wholly directed to activity; in man, it can lead to *scientia* by which temporal things are directed to a rational end. Animals are limited to judgments concerning flight from pain or the seeking of pleasure; man can form judgments based on eternal principles and rise even higher, to a contemplation of the principles themselves.[52]

The admirable order of the world is constantly before Augustine's mind and he considers that the greatest tragedy for the soul lies in the overthrow of that order which occurs when the soul, naturally fitted to rule the body, turns its affections to corporeal things as ends. While irrational souls are fittingly devoted to the care of the body, man is called to subordinate pain and pleasure to higher ends and use the knowledge of sensible things as a means to arriving at God.

Augustine does not seem to be aware of the difficulty which arises as a result of his theory of sensation. On the brute level, the awareness of pleasure and pain can be adequately explained by the soul's awareness of the body's passions. The judgments concerning equality and order may also be explained in that way. Further, the meaning assigned to sights and sounds by the soul itself could be interpreted by others in terms of the images produced by the soul. However, how the awareness of a

[51] *De Trinitate* XV, 12, 21, P. L. 42, 1075; *De Civitate Dei* XIX, 18, P. L. 41, 318.

[52] *De Trinitate* XII, 15, 25, P. L. 42, 1012; XIII, 1, 4, col. 1016; XII, 2, 2, col. 999.

passion in the body, or of the form produced in the presence of that passion, can provide an adequate knowledge of the object which caused it, is not clear. Augustine, always a realist, constantly appeals to experience for evidence that it is the external body that is seen, and more than once wonders at the manner in which the form of the external body affects the soul without ever leaving that body. His theory seems effectively to cut off the soul from the object itself. This difficulty was not found in the theory of Plotinus because of the world soul which unified all objects in the corporeal world and established a "sympathy" between them.[53] Later writers, following Augustine's

[53] Plotinus bases his explanation of sensation on five chief factors: 1) Sensation cannot be explained by a material impression (i. e. the seal-on-wax impression of the Stoics). 2) An organ is a necessary intermediary between the soul and the object. 3) The action of one object on another at a distance can be explained by the universal sympathy which reigns in the living organism of the universe. 4) Because of this sympathy between parts, no affection of the medium between object and sense organ is necessary. 5) The soul must turn its attention to the object if it is to perceive it. The first four concern the "impression" in the organ, the fifth is required for the act of perception in the soul. The first four concern man insofar as he is a part of the universe, the last refers to the "true" man, the rational soul. (*Ennead* IV.3.26; IV.6.2-3; IV.4.23; on sympathy: IV.4.36; III.3.5; IV.4.32). In *Ennead* VI.9.8, Plotinus stresses that difference, not distance, effects separation; what is "far" is different and when difference disappears the beings are present to each other. In IV.5.2, he admits that a corporeal medium is accidentally necessary to preserve the continuity of the living being but it rather hinders than helps sensation; here he also opposes the theory of the visual ray as a "stick."

Writing in *De musica* (VI, 14, 44, P. L. 32, 1186), *De immortalitate animae* (15, 24, P. L. 32, 1033), *De duabus animabus* (13, 20, P. L. 33, 109) Augustine refers tentatively to the possibility of a world soul. *De Consensu Evangelium* (I, 23, 33, P. L. 34, 1058) refers to the theory as a "magna atque abdita quaestio," and in the *Retractations* (I, 11, 4, P. L. 32 601) he confesses that he has not yet reached a decision about the matter. I am indebted to Dr. Vernon J. Bourke for the suggestion that when Augustine speaks of "soul" he may sometimes be referring to soul-in-general rather than to a specifically human soul. If this is so, there may be a closer link to Plotinus' theory than at first appears. That Augustine was troubled by sight-at-a-distance (which Plotinus felt he had adequately explained by his theory of sympathy and the immaterial nature

principles to their logical conclusions, develop theories in which the soul produces its own object and has no means of establishing a direct relation between that object and the external world.

Sight and Hearing

This difficulty becomes more apparent after a consideration of the details of the processes of sight and hearing. Like most of his predecessors, Augustine gives more attention to these activities than to the other three. The senses of sight and hearing can be the source of rational pleasure; they provide most of the signs by which one man communicates with another, and they have objects which are outside of the body and attained by the soul in some extraordinary manner.[54]

No single passage gives a complete explanation of the process of vision. Remarks usually occur in illustrating some other point and, in the *De Trinitate*,[55] Augustine observes that while it is easy to demonstrate the process it is difficult to explain it. The visual ray, of which he frequently speaks with wonder, directed by the attention of the soul, goes out from the pupil of the eye and touches the external object in such a way as to cause a passion in the sense.[56] The sense can be affected by

of all qualities) would seem to indicate that the details of Plotinus' theory were not known to or accepted by him. For the use of sympathy by the Stoics see *L'Evolution de la Doctrine du Pneuma* by G. Verbeke (Paris, 1945), p. 123, and Cicero, *De divinatione* II, 69.

[54] *De ordine* II, 11, 31-33, P. L. 32, 1010; *De libero arbitrio* II, 7, 16-17, P. L. 32, 1249-50; *Ep. CXXXVII*, 1, 6, P. L. 33, 518; *De Doctrina Christiana* II, 3, 4, P. L. 34, 37-38; *Ser. XXVIII*, 4-5, P. L. 38, 184-5.

[55] *De Trinitate* IX, 3, 3, P. L. 42, 962-3.

[56] *De quantitate animae* 23, 43-44, P. L. 32, 1059-60; *De Genesi ad litteram* I, 16, 31, P. L. 34, 258; IV, 34, col. 319; *Ep. CXXXVII*, 1, 6, P. L. 33, 518; *Ser. CCLXXVII*, 10, 10, P. L. 38, 1262, etc.

The visual ray has a long history in the theory of sensation. Empedocles (Hermann Diels, *Die Fragmente Der Vorsokratiker* I, 301-2, A 86) likens it to a lantern flame and Archytas (*Ibid.*, I, 431, A 25) utilizes rays without any other medium. Beare (*Greek Theories of Elementary Cognition from Alcmaeon to Aristotle* [Oxford, 1906], pp. 9-13), suggests that even Alcmaeon may have used the rays and quotes a passage to show

other bodies, and, since it is in a living body, it is at the same time receiving the action of the soul which operates on it through the instrumentality of light. Awareness occurs when the soul with great rapidity forms for itself an image of the form in the sense. The rational soul judges this image according to certain principles which it contains. Note, however, that the soul reaches only the form in the sense and is aware only of the image that it itself produces. The external object is necessary to maintain the impression on the sense, but what is known and judged by the soul is an incorporeal representation of the impression.

Plotinus rejected the idea of a visual ray because he argued that such a stick-like projection could only guarantee indirect knowledge of the object. Augustine accepts the figure of the stick and from his earliest writings marvels at the manner in which the ray reaches out over great distances—even to the sun—with extreme rapidity. In the *De Trinitate* he expresses a passing doubt about the ray but on the whole accepts unquestioningly the current medical theories which postulated it.[57]

The analysis in *De Musica* is illustrated by a case of hearing.[58] When the air in the ear is disturbed by the motion coming from the external object, the soul which had been carry-

that the Pythagorean theory involved them. Plato (*Republic* VI, 507 d-508 a; *Timaeus* 45 b-46 d, 667 d-68 d) holds that sight is the only sense which requires a medium—the ray. Chalcidius (Joannes Von Arnim, *Stoicorum Veterum Fragmentum*, II, 232-3, 863) uses a figure of a fisherman feeling through the line the shock of a torpedo fish, and Diogenes likens the process to contact with a stick (Diogenes Laertius, *Lives of Eminent Philosophers*, II, 261). It is this latter theory that Plotinus criticizes in *Ennead* IV.5.5., the former in *Ennead* IV.5.1.

[57] *De Trinitate IX*, 3, P. L. 42, 963. Augustine refers to the Platonic theory in *De Genesi ad litteram*.

[58] After a long discussion of the nature of the numbers, Augustine finally concludes: "Quae si vera sunt, apparet inventa esse in anima quinque genera numerorum quibus cum addideris corporales illos quos sonantes vocavimus, sex genera numerorum disposita et ordinata cognosces." *De musica* VI, 9, 24, P. L. 32, 1177.

ing on its vital activity in the ear acts with great difficulty because of the change. The clear and mobile air which is its instrument does not respond as easily to its operation in the ear. Actually, unless that act was retained in the memory it would not have attracted the soul and what is "known" is the act or motion retained in the memory. The soul judges of pleasure or pain according to the sensual numbers; it judges of the meaning of the passage heard or of the rightness of the passion through judicial or rational numbers.[59]

Although Augustine links hearing with sight as a sense which has its object outside the body, his explanations always suppose that the sound is carried to the ear (and not that the soul reaches out to the sound as Plotinus seems to hold). Indeed, sound has a more active role than the visual object and travels through the medium of the reverberating air. Through the *recordabiles* the soul embraces a period of time even as the visual ray traversed space.[60] Augustine asks himself the question: How does man recognize that a sound is outside or at a distance? Is it not because the soul senses where the object is? He has no answer for the query.[61]

Because of the fleeting character of sense impressions, memory plays an important part in any sense experience. Without the memorial numbers of *De Musica* no judgment of a complete experience could be made. No writer before Augustine has placed such stress on the transitory nature of sense experience; not even a single syllable could be grasped if its integrity

[59] *Ibid.*, VI 5, 8-9, 24, col. 1167-1177. The use of the term "numbers" is not found in later writings. In *De Genesi ad litteram*, as we have noted, Augustine points out that in hearing as in the other senses the soul employs the instrument of light which acts on the air in the ear; the object sets the air, which lies between it and the sense, in motion and so strikes the ear and causes the passion of which the soul is aware.

[60] *Ibid.*, VI, 8, 21, col. 1174.

[61] *Ep. CXXXVII* 2, 6, P. L. 33, 518. As early as *De quantitate animae* he puzzles about how the soul can feel where it is not and sense outside the flesh in which it lives (23, 43-44, P. L. 32, 1059-66).

were not guaranteed by the retention of each succeeding image in memory.[62]

This memory is involved in nearly all of man's activities. Before carrying out an action he must first have the complete plan in mind so that, in a sense, the future as well as the past and the present is stored there. Unlike the Plotinian memory, this function is not able to recall past experience but is a storehouse of images to which the soul may turn when it wishes to plan the future or reconsider the past. Since these images are incorporeal similitudes which are not stored in any corporeal organ, they can never exhaust the capacity of the soul.[63]

Closely linked to the memory is the imagination. In the early works, no specific power is designated for the process of making images or of storing them. It is the soul which knows and forms images.[64] *Spiritus* takes over the function in *De Genesi ad Litteram* and forms the image as soon as the sense is impressed by the object. The cooperation of the imagination is required for *scientia* (a judgment of images received *per sensus*) but intellectual vision is independent of all images.[65]

Uses of the Term "Sensus"

The term *sensus* is variously used by Augustine. One of his great preoccupations in the *Retractations* is to point out that *sensus* in the early works usually means *sensus corporis*.[66] This

[62] *De musica* VI, 8, 22, P. L. 1175; 2, 3, col. 1164.

[63] *De quantitate animae* 5, 8-9, P. L. 32, 1040; *Confessionum* X, 12, 5, P. L. 32, 784-5; *Contra Epistolam Manichaei* XVII, 21, P. L. 42, 185; *Ep. CXLVII*, 17, 43, P. L. 33, 616; *Ep. CLXVI*, 2, 4, P. L. 33, 722; etc.

[64] The *Soliloquies* speaks of a *speculum cogitationis* which the *mens interior* must judge, and of *phantasia* in the soul (II, 20, 35, P. L. 32, 903). *Epistle* 7 refers to the imaginings of the soul; memory is considered to be a storage place rather than a power until the *Confessions* (X, 8, 15, P. L. 32, 785).

[65] *De Trinitate* XII, 2, P. L. 42, 999; XI, 5, 8, col. 990; *De Genesi ad litteram* XII, 12, 25, P. L. 34, 463.

[66] *Retractationum* I, 1, 2, P. L. 32, 586; I, 3, 2, col. 588; I, 4, 2, col. 589-90.

qualification is important to him since, under the influence of Scriptural terminology, he later uses *sensus* to refer to interior sense and intellect.[67] As vision is the highest type of external sense, he sometimes employs *visio* for *sensus* in its widest meaning. Like St. Ambrose, he frequently uses such terms as the "senses of the soul," the "eye," or "ear" of the heart.[68]

In the early *Soliloquies*, as well as in some later works, *sensus* sometimes denotes a kind of general cognition or opinion; sometimes it is used for "meaning" (i. e. "the sense of this passage") in interpreting Scriptural passages.[69]

In *De Trinitate*, *sensus* is the corporeal instrument through which the soul perceives; again, it is distinguished as *sensus corporis* proper to man and brutes from the *sensus* proper to man and pertaining to the understanding. *Sensus* as a fivefold living organ is frequently employed in this and later works.[70]

In *De Libero Arbitrio*, Augustine explained self-consciousness by means of an interior sense; the *Confessions* speak of an interior sense found in both man and brutes, also, but in the later writings, "interior sense" is identified with *ratio* and is

[67] So he explains in *Quaestionum in Pentateuchum* (II, 114, P. L. 34, 636): "*Aisthesecos* quidem graecus habet, quem latini sensum, non intellectum dicere solemus; sed Scriptura de sensu interiore, quem intellectum vocamus, sic loqui solet, sicuti est ad Hebraeos. . . ."

[68] *In Joan. Ev.* CXXI, 20, 5, P. L. 35, 1958; XVIII, 5, 8, col. 1542.

[69] *Soliloquiorum* II, 3, 3-4, P. L. 32, 887; II, 15, 29, col. 899. *Sensus* as "meaning" is common in the commentaries on Scripture. In *De musica* (VI, 7, 19, P. L. 32, 1173) *sensus seems* to be a kind of sensitivity: ". . . ita sensus ejus actioni ejus congruat, quam proportione agit universi motus, cujus haec pars est?" This passage seems to be influenced by the Stoic idea of sympathy, or Plato's *Timaeus* (see note 12).

[70] *Sensus* is often used to denote the instrument in sensing. Thus it is of *sensus*, the instrument of the soul, partly spiritual (because living) and partly corporeal (because in the body) that Augustine speaks in *De Trinitate*. Ordinarily he uses a term like *visus*, or *tactus*, for the instrument and *visio* for the sense informed. The use of *sensus* for the living organ recurs again and again throughout the later works. *De Trinitate* VIII, 6, 9, P. L. 42, 954-55; IX, 3, 3, col. 962; VI, 10, col. 966; XII, 13, 20, col. 1009.

to be found only in man.[71] *Spiritus* has a function similar in part to the interior sense of the *De Libero Arbitrio.*

The most important use of the word for the present study is that which is defined in the *De Quantitate Animae* and elaborated in *De Musica. Sensus* is a passion of the body which in itself does not escape the notice of the soul; it is a kind of more manifest life in which the soul directs itself throughout the body in the sense of touch and judges of the different objects of each sense. It is also called an act of the soul exercised through the body.[72]

In animals, the natural impulse of the irrational soul is directed to the good of the body. *Sensus* in man is also directed to good but for fallen man the concupiscence which turns the will away from things eternal is closely linked to sensation and must be battled constantly.[73] *Sensus* is contrasted to *scientia,* the rational use of sense experience, by which the soul judges sense objects according to eternal rules. *Sensus* is also distinguished from cognition *per sensus* in which the rational soul recognizes the meaning assigned to some sensible sign or gesture.[74]

From first to last, *sensus* as a function is an act of the soul using the body as its instrument. Whether on the level of the passions or of the cognition of external objects, it is a power by which the soul turns outward. The irrational soul can make only a limited use of this power, but the rational soul may use the body's passions to rise from a knowledge of the beauty of the sensible world to the immutable beauty of God.

[71] *Enn. in Ps.* CXLVIII, 3, P. L. 37, 1939; *De Civitate Dei* XI, 37, P. L. 41, 341. See also, note 67.

[72] The first definition is negative in form and not clear; subsequent passages emphasize the fact that *sensus* is a power and an act. *De musica* 33, 71, P. L. 32, 1074; 34, 77, col. 1077; 34, 78, col. 1078; 35, 79, col. 1079.

[73] The distinction between *sensus* and *concupiscentia* is clearly pointed out in *Ser. CCLXXVII* (VI, 18, 56, P. L. 44, 856).

[74] This is especially stressed in *De Trinitate. De quantitate animae* makes an early distinction (30, 58, P. L. 32, 1068) which frequently reappears.

Augustine and Plotinus

In his treatment of sensation, Augustine does not refer directly to a source except for some passing references to the *medici* and to Biblical passages which support his teaching. As a rule he presents his basic principles—that the judge is superior to the thing judged, the spiritual principle to the material—as a matter of fact which needs no justification.

There are some indications of St. Ambrose's influence. Ambrose is fond of using such terms as *oculos animae, oculos mentis, nares animae,* and *intimo sensu,* and these expressions recur in Augustine's early works as well as in his later explanations of Scriptural passages. Ambrose speaks of the illumination of the *mens* by Christ, of the mind which when weakened flies from the light as an infirm eye from the sun.[75] He constantly warns his hearers to turn from things of sense, and speaks of the magnitude of the soul as one of power.[76] The perfect soul is warned to fly from temporal things and to ascend to the eternal and invisible.[77] Like Plotinus and Augustine, he considers evil to be an absence of good, and holds that flight from sensibles is not a matter of local motion but a flight by means of the "interior foot" of the soul, love.[78] Like them,

[75] Only a few of the many passages can be listed here: *Enn. in Ps.* 118, *Ser.* 5, 30, P. L. 15, 1329; *Ser.* 6, 10, col. 1338; *De Abraham* II, 3, 11, P. L. 14, 483-4; II, 4, 16, col. 485. There are strong resemblances here to passages in the *Soliloquiorum* (for instance: I, 6, 12). In *De Cain et Abel,* Ambrose speaks of the role of the soul in sensation: "Mens autem et sensus pars animae"; "Mens nostra per hos sensus respicere videtur, et maxime per visionem, quae omnibus sensibus corporis praestabilem aestimatur." (I, 10, 41; 17, 61.)

[76] *Exp. in Lucam* I, 31, P. L. 15, 1626; I, 6, col. 1615; *De Abraham* II, 4, 13, P. L. 14, col. 484; II, 8, 46, col. 499.

[77] "Perfecta autem anima aversatur materiam . . . divinis intendit, terrenem autem materiam fugit." *De Isaac et Anima* III, 6, P. L. 14, col. 530; IV, 11, col. 533; *De Abraham* II, 7, 41, P. L. 14, 497. (All selections have been taken from the earlier works of St. Ambrose which may have been available to the young Augustine.)

[78] "Nec navibus fugiamus . . . sed fugiamus animo et oculos, aut pedibus interioribus." *De Isaac et Anima* VIII, 79, P. L. 14, 559-60.

he also suggests that the soul must seek within itself the truth that always remains.[79]

In a brief survey, Cassamassa lists some possible sources of Augustine's general philosophy giving an important place to the works of Cicero, Varro, the *Attic Nights* of Gellius and the six volumes of Celsus on the opinions of philosophers.[80] Plotinus and Porphyry are also listed together with some major points in which Augustine agreed with or differed from them. Marrou suggests that Augustine's nine citations from the *Timaeus* are from the translations of Chalcidius and Cicero, the four references to the *Phaedo* from Apuleius' Latin translation and all other Platonic citations from Cicero.[81] In general, most writers conclude that the "books of the Platonists" mentioned in the *Confessions* were some portions of the *Enneads*, probably in a translation by Victorinus; they also agree that he was familiar with many of the works of Porphyry.

The few writers that have treated Augustine's theory of sensation all refer to his borrowings from Plotinus. Certain

[79] *Liber de bono mortis* III, 10, P. L. 14, 572. In this work (I, 9, 42), he could likewise find the Platonic argument from the Phaedo used in the *Soliloquiorum* (II, 13, 23, P. L. 32, 896). The theory of air and of the "vital spirit" by which the body is administered is frequently treated by St. Ambrose (*De Noe et arca* 25, 92, P. L. 14, 421; *De Abraham* II, 8, 50, P. L. 14, 502; etc.) It may be noted that Tertullian's *De Anima* (quoted in *De Civitate Dei* and *De Genesi ad litteram*) includes a comprehensive history of Platonic theory and excerpts from the *Phaedo*, *Phaedrus* and *Timaeus*.

[80] Antonio Cassamassa, "Le fonti della filosofia di S. Agostino," *Acta Hebdomodae Augustinianae Thomisticae* (Rome, 1931), pp. 88-95. In Cicero's writings, also, Augustine could have found much Stoic and Platonic teaching such as: the necessity of reason's governing sense (*De finibus* IV, 13, 38); the senses are messengers to the soul (*De nat. Deorum* II, 56, 140); the importance of *ratio* or *mens* (*De fin.* II, 14, 45); ratio must pass judgment on sense (*Ibid.*, II, 36); concupiscence as an obstacle to thought (Augustine quotes the lost *Hortensius* in *Contra Jul. Pel.* IV, 13, 73); memory as an important link between the past and the future (*De officiis* I, 4, 11; *De fin.* II, 45; *Tusculanarum Disputationum* I, 26, 66).

[81] Henri Irenee Marrou, *Saint Augustin et la fin de la culture antique* (Paris, 1938), p. 34; p. 43; pp. 141-43.

similarities in the two philosophers are immediately apparent: 1) The soul is by nature active. 2) The soul is superior to the body and therefore cannot be affected by it.[82] 3) The soul is wholly in every part of the body (proved by appeal to sensation and memory).[83] 4) In the presence of a passion in the body the soul makes an image of the impression made and it is this image which is the object of awareness. 5) An external object is necessary to cause a passion in the organ; the organ itself is a mean between the object and the soul since it is a living corporeal principle.[84] 6) Sensation terminates in the imagination. If the soul is unaware of the image the passion in the body is not known. 7) The primary function of sensation is the manifestation of pleasure or of pain for the purpose of maintaining the well-being of the body.[85] Undue attention to the pleasures of sense may cause disorder which turns the soul from its proper object, immutable truth.

[82] Cleanthes and Lucretius argue to the corporeality of the soul from the fact that it was affected by the body. Against this Stoic position, Plotinus argued that the body could in no way affect the soul. For Cleanthes' proof see Verbeke, *op. cit.*, pp. 41-51; cf. *Ennead* IV.2.2.

[83] Chalcidius attributes this to Plato: "Est igitur tota, inquit, anima in totis partibus viventis animalis." (*Platonis Timaeus interprete Chalcidio cum eiusdem commentario* [Leipzig, 1876], p. 261). He also uses a figure found in Plotinus and Augustine: the soul penetrates the body "ut lucis quae corpus aerium penetrat." (*Ibid.*, p. 263.) Cf. *De Gen. ad lit.* VIII, 21, 42, P. L. 34, 389; *Ennead* VI, 4, 7.

[84] The affection of the organ in Plotinus is psychic rather than physical. Like the soul, the form which is transmitted is wholly in every part of the air. It is not extended although it somehow becomes extended on being received into the organ. For Plotinus, all qualities are incorporeal and become sensible as acts of a material body. Since the form of extension is also present in the body, the qualities become extended. Sound is an apt example of such a form since it is received in its entirety by every hearer. (*Ennead* VI, 4, 12; IV.5.3). Augustine was also fond of the analogy of sound. The object can act on the organ only because it is somehow like it and because it is a part of a unique animal ensouled by a single soul; the passion involved is midway between the sensible and the intelligible and proportionate to both extremes. (*Ennead* IV.4.36; III, 3, 5; IV.5. 8; IV.4. 40-41; IV.4. 23.)

[85] This is also commonplace for Cicero as in *Tusc. Disp.* I, 56 and *De fin.* II, 31. *Academica* II, 10, 30 indicates that it is the soul that senses.

As we have seen, some of these principles could have been derived from other sources than Plotinus. Some differences in the theories of the two men stem from the basic metaphysics of each; others have a relation to the details of certain kinds of sensations. Some of the differences can be realized only by a comparative reading of passages but a few specific points may be indicated. 1) Plotinus holds that man in this world has several souls, that the proper sphere for the true man is above all bodies and on his return to the One, man will not only be freed from the body (and sensation) but will even lose his identity. For Augustine, the soul, though superior to the body, has a natural relation to it, is not in it as a punishment and will be united to it in heaven; he rejected Platonic reminiscence although he did not solve the problem of the origin of the soul.[86] 2) Augustine appears to be unaware of Plotinus' opposition to the use of a medium or of corporeal contact in explaining how the "form" of the object affects the organ. He does not refer to the sympathy which by uniting the corporeal beings of the Plotinian world makes sensation possible. He accepts the visual ray which Plotinus rejected, admits the medium of reverberating air in the case of hearing and lists the instruments which the soul uses in acting on the body. He considers the passion in the organ to be a physical change brought about by corporeal contact. For this reason the sight of an object at a distance and the hearing of a distant sound were a source of wonder up to the end and Augustine never claims to have explained them adequately.[87] 3) Man, in Plotinus, has two imaginations and

[86] Augustine opposes the "prison house" notion of the body in *Sermon* 277 (III, 3, P. L. 38, 1259). For a chronological list of the texts referring to pre-existence of the soul in Augustine see Hubert de Leusse, "Le Problème de la preexistence des âmes chez Marius Victorinus Afer," *Recherches de Science Religieuse*, XXIX (1939) 236.

[87] In fact, the details of Augustine's theory seem closer to Plato than to Plotinus. Vision of objects at a distance was not a great problem for Plotinus for whom "to be far" was "to be different." To indicate how necessary sympathy was for vision he supposes a case in which an eye

two memories—one for the sensitive and one for the rational soul; the latter recalls intelligible as well as sensible images. Since the images are acts of the soul, not seal-on-wax impressions as in the Stoics, no organ is required for memory or for imagination. As a helpful tool for forgetful man, memory is useful in this life but will not be needed in the next; it is also dangerous since it involves a kind of habit which links the soul to those objects which attract it.[88] Augustine speaks of a single memory which contains sensible and intelligible acts or images; he sometimes speaks of a lower kind of memory which like the memory of brutes tends to link man to sensible things. However, he considers memory to be important in the next life as well as this. He tends to make memory more passive, imagination more active than does Plotinus. While he sometimes speaks of the power of memory, it is the soul which recalls or recognizes the images stored in the treasure house of memory when it turns its attention to it. Augustine's stress on the need for memory in even the briefest sensation does not have a parallel in the *Enneads*; imagination (*spiritus*) seems to have more powers than the Plotinian imagination in that work. 4) Augustine has a far wider interest in physiological details than does Plotinus. To the end of his life he continues to seek for an adequate explanation of such activities as sight and hearing.

placed at the edge of our universe gazes at another world but cannot see it because it does not share its soul. (*Ennead* IV.5.8) Ep. CXXXVII 2, 6, P. L. 33, 518; *De quantitate animae* 23, 41-44, P. L. 32, 1059-60.

[88] Plotinus strongly opposes the Stoic notion of memory as a passive reception of forms (*Ennead* IV.6.3). On the two memories see: *Ennead* I.8.15; VI8.3; IV.4.17; I.2.5. Memory does not require an organ but is proper to a soul (*Ennead* IV.3.26); it not only involves a recalling of things but also a disposition toward them and it is the latter which is most dangerous for the soul (*Ennead* IV.4.4). Since sensation is an act of the soul what is remembered is this act (and not some impression) (*Ennead* IV.3.26). Phantasia is spoken of as a shock in the irrational part which is responsible for desires, etc. (*Ennead* IV, 4, 17); Augustine writes to Nebridius: "nihil est aliud illa imaginatio . . . quam plaga inflicta per sensus," (*Ep.* VII, 3, P. L. 33, col. 69.)

5) Both men are opponents of gross materialism. Plotinus in his defense of the powers of the soul makes the source of evil to be the material body which limits and burdens the soul. Augustine does not perfect the soul at the expense of the body but recognizes in the limitations of the body the punishment, not the cause, of an evil which originated in the soul's misuse of its great power, free choice. Plotinus, indeed, had a strong influence upon Augustine's thought, but other Platonic influences—Cicero, Chalcidius, Ambrose—also affected his conclusions as did other non-Platonic works of the Stoics, the *medici* and the Bible from which much of his vocabulary was derived.

The active theory of sensation also has a history among such Greek thinkers as Gregory of Nyssa, Nemesius and John Damascene. In the Latin world it reappears in the writings of Boethius, John Scotus Erigena and Bonaventure. St. Thomas in referring to the active theory reduces it to the Platonic position.[99] Through Descartes and his followers it has influenced modern philosophy and a consideration of these writers would serve to throw new light on Augustine's teaching as well as on its influence through the ages down to the present day.

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[99] Etienne Gilson (*The Philosophy of St. Bonaventure* [New York, 1938], pp. 348-62) gives a brief summary of St. Bonaventure's theory with reference to his resemblance to and difference from St. Augustine. St. Bonaventure retains and emphasizes the notion of sensation as a turning of the soul to exterior things. For St. Thomas' position see *De Ver.* 10, 6.

Outline of A Thomistic Critique of Knowledge

by William H. Kane, O.P.

IN THE COURSE of ordinary life we seldom stop to consider the validity of our knowledge. Our attention is usually directed toward the world around us to the task at hand. With spontaneous realism we judge that things are as they appear to be, and we go about our business without questioning whether they are really so or not. When there is need for caution, we stop, look and listen, and then proceed accordingly. We do not as a rule question the validity of our senses or of our judgments.

Nevertheless there are occasions when we wonder whether we have seen or heard correctly. Sometimes we discover that we have been mistaken. We are annoyed when others disagree with us and say that we are mistaken in one of our cherished opinions. Experiences such as these prompt us to be on our guard. They teach us to doubt what can well be doubted, and to question whether this or that is really so or not. Ordinary doubts like these are opposed to ordinary truth and certitude, and they are concerned with various points of direct knowledge.

When we take a good look, when we consider something well, when we see a thing clearly and firmly assert what is or is not, then we possess ordinary truth and certitude. A truth is known in this ordinary way when we are aware of judging in conformity with things as they are. I look out the window and see the rain falling. I assert that it is raining, and thus I know a truth in the ordinary way of knowing truths. In all ordinary circumstances, even in matters which pertain to the particular arts and sciences, it is sufficient to know truths in this direct manner, whether or not we make use of special

instruments and techniques to reveal the facts or to direct our judgment.

But if we wish to consider things in general, not just material things but anything whether material or immaterial, and if we desire to investigate the general principles, causes and attributes of things, then we are at the threshold of the most universal science, called metaphysics. In order to develop metaphysical knowledge and attain to the science of common being, we must assure ourselves of the truth of the principles by which we shall investigate the subject of the science and demonstrate whatever can be demonstrated in the science. In metaphysics, just as in any other science, it is by the light of the principles of demonstration that we judge the truth of everything else. Indeed, whatever else we understand with certainty whether in ordinary or in philosophic thought, we judge in the light of some principle which we know to be true, or at least believe to be true. In this way we know that we must be at the station in time for the train we wish to take; otherwise it will depart without us.

What is peculiar about metaphysical inquiry is that we investigate not just a particular kind of thing but being as such, whether material or immaterial, and thus we undertake a universal consideration of truth.[1] Hence we must at the threshold of metaphysics consider the validity of the principles on which all our knowledge depends. We do not confine ourselves to the proper principles of particular kinds of things, nor do we inquire whether this or that in particular is so or not. We must face a universal question concerning the truth or validity of our knowledge, and raise at once a universal doubt.[2]

The only alternative to the approach through universal doubt

[1] "Philosophia prima considerat universalem veritatem entium." St. Thomas, *In II Met.*, 1, n. 273.

[2] ". . . non particulariter sed simul universalem dubitationem prosequitur." *In III Met.*, 1, n. 343.

is a dogmatism of one kind or another. Dogmatists begin with some general assumption about reality or knowledge and then try to coordinate everything else with their original view. Realists, for example, usually assume that there is a world of beings distinct from our knowledge of it. Some say that this assumption is so evident that it needs no justification; others hold that it must and can be critically justified. On the other hand idealists and subjectivists question whether we know at all, or very much, about a world distinct from our knowledge of it, and these try to show how our knowledge might be developed wholly or in part from within the knower. The assumption of realism is not satisfactory for idealists, nor is the assumption of idealism satisfactory to the realists. If this conflict between realists and idealists is to be resolved, there must be another way to proceed.

The very fact that so many idealists deny the position of the realists indicates that there may be a fundamental difficulty which realists are overlooking, or not adequately solving. As an alternative to the dogmatic approach so common today, we shall in this paper follow Aristotle and St. Thomas through the portals of universal doubt.

However, we must note at once that this is not an ordinary doubt, but a scientific or methodical doubt. It is not concerned with particular items of direct knowledge, but with the whole scope and nature of truth and certitude. It is not a direct but a reflex doubt, and is concerned with the reasons for knowledge and truth itself. It is a question of reflecting on our knowledge and inquiring whether we know that we know, and how and why we know. We desire to assure ourselves of the fact of valid knowledge, of truth and certitude, and of the reasons for the facts.

We know that we know by reflecting upon our acts of knowing. We can and do reflect on our acts of knowing and upon the intellect itself in a particular and ordinary way when we

know that we have an intellect from the very fact that we understand something. This requires only the presence of the intellect to self and to itself in the act of knowing. But to know truth itself is a difficult task which calls for diligent and subtle investigation.[3]

In order to understand truth itself we must reflect upon our act of knowing and attain knowledge not merely of the act itself but also of the proportion of the act of knowing to things. This proportion of the act of knowing to things cannot be known unless the nature of the act is known; nor can the nature of the act be known unless the intellect itself is known. We must know the nature of the knowing power in order to know the proper reasons for truth and certitude.[4]

To question the very nature of the human intellect, and its act, and the proportion of the act to things is to raise a scientific question or methodical doubt. This doubt is universal with respect to the reasons for the validity of all our intellectual knowledge. Indeed, if we extend our inquiry, as we should, to include also our sensory powers and acts of sensation, our doubt is universal with respect to the reasons of all our knowledge.

However, this doubt need not be real, but may be a fictitious doubt. We already know from ordinary experience and from the special disciplines a number of truths which are clear and certain to us, and there is no reason why we should really doubt of them. In regard to some privileged truths we may not be able to doubt even if we try. But reasons for truth and certitude which we do not already know we can really question, and ones which we do know already we can doubt fictitiously, or at least try to doubt. In a word, we can and should abstract from the reasons for truth and certitude which we already know in order to undertake a more profound and universal investiga-

[3] ". . . requiritur diligens et subtilis inquisitio." *Summa Theol.*, I, 87, 1.

[4] ". . . cognosci non potest nisi cognoscatur natura principii activi quod est ipse intellectus." *De ver.*, I, 9.

tion of the facts of valid knowledge and of the causes of our whole knowledge of the truth.

Furthermore, this doubt is negative, not positive. It is a question of considering the facts and the general reasons for truth and certitude, whether they are and what they are, without positive reasons for doubting that they are. A positive doubt that there is any truth or certitude is absurd and impossible to exercise, because some truths are manifestly inescapable, and are known or implied even in doubting. If I doubt, or even if I am mistaken, I am.

In order to place limits on our inquiry, we note that all of our knowledge falls within the confines of sensory experience and the understanding of first principles; these are the extremes into which all our judgments are resolved.[5] Hence our inquiry should begin with a consideration of first principles and of the common conceptions from which all demonstrations proceed, and it should be completed with an investigation into the validity of sensory knowledge. We must consider first the understanding of principles and then sensory knowledge, because truth and certitude pertain to the intellect, and because the object of the intellect is most universal: it can reflect over its own act and itself, and also can judge of sensory knowledge.

Do We Know that We Know?

Before we can investigate the reasons for the validity of our knowledge, we must first settle a question about the fact of the matter. Do we know that we know? This question does not concern things which are known by direct knowledge, such as men or trees. Rather, it is a question which concerns knowledge itself. It is not a question about the nature of truth or certitude as such, because the question of what a thing is presupposes that we know that it is. Our initial question arises

[5] ". . . sensus sunt extremi sicut intellectus principiorum, extrema appelans illa in quae fit resolutio judicantis." *De ver.*, XII, 3.

from a reflex doubt about knowledge. This doubt is fictitious and negative, but truly universal. We ask whether we know a valid starting point for human knowledge. Is there a valid first principle and a definite order of basic concepts which are presupposed to all other intellectual knowledge? We are inquiring about what must be known first, before anything else can be known.

This question cannot be answered from memory. We cannot remember what we knew first of all. We have made a long mental journey since we attained our first bit of knowledge, and we cannot by memory retrace all our steps. But what cannot be accomplished by memory can perhaps be accomplished by logical reflection.

Is there anything which is necessarily first in our intellectual knowledge, and which is presupposed to everything else that we know? What is it that must be known first, before anything else can be known?

If there is something first in our intellectual knowledge, it is not a particular thing, such as something hot or cold, a man or a tree. There is no apparent reason why the one or the other or any particular thing must be known first. But if we wish to declare what we understand by a man or a tree, we will say that it is a special kind of organism. By organism we understand a kind of natural body, and by natural body we understand a kind of being, that is, an intelligible object. Thus it appears that we must know *being* first, before we can know any particular kind of being as such, just as we must know what an organism is before we can know that a plant or animal is a particular kind of organism, Hence we know *being* or the intelligible first. Everything else which we know presupposes the knowledge of being, and is known as a determination of being.[6]

[6] ". . . in prima quidem operatione [intellectus] est aliquod primum quod cadit in conceptione intellectus, scil. hoc quod dico ens; nec aliquid hac

The knowledge of being which we attain first is most confused and undetermined. In order to know anything else, we must know that this is not that. To know that this is not that, is to know also distinction. Hence we must know *being* first; then we must know something which is opposed to being, namely, not-being, or this being as opposed to that being; then we must know distinction or negation. Distinction is known by the very act of the mind in which we separate, divide or distinguish not-being from being, or this being from that being. Thus we see that the first principle which we attain is the principle of contradiction: we cannot at once both affirm and deny being; being is not not-being; this being is not that being.

The principle of contradiction is our first and best known principle. In regard to this principle no one can be mistaken. We can think that a man is living or that he is dead, and we may be mistaken in either case. But no one can think that being is not-being, at least not at once or under the same aspect. Furthermore, the principle of contradiction is not a mere supposition, but a necessary and self-evident principle. If we proceed at all with our knowledge of being and not-being—which we do if we act as humans—we must divide them and deny that being is not-being. It is impossible for us to know anything else until by negation we have attained to knowledge of distinction, just as we must take our first step before we can take another. For human beings the principle of contradiction is naturally first. It arises from the natural order of human knowing, in which sensory knowledge is presupposed to intellectual. By the senses we apprehend a changing world in which sensory objects come and go, pass away or cease to be. Thus the knowledge of being and not-being comes naturally first to the human intellect. The principle of contradiction is logically first and prior to all other intellectual knowledge in us, because

operatione potest mente concepi nisi intelligatur ens." *In IV Met.*, 6, n. 605.

everything else, if distinguished from the first, presupposes knowledge of distinction which is attained through the act by which the principle of contradiction in itself is known.

Because the principle of contradiction is our first and most valid principle, it cannot be demonstrated, nor can it be doubted interiorly by the mind. Some persons, it is true, have said that they deny the principle of contradiction, or that they doubt it. But in this matter it is not necessary that we believe what they say, nor that they believe it themselves. They may be using words parrot-fashion, without understanding what they say. Objections it is true can always be made to anything which is expressed outwardly, but inwardly there comes a time when we can no longer resist or withhold our judgment on this basic principle. Yet because this principle of contradiction is of such vital importance in our knowledge, it must be defended against all serious difficulties and objections.

Many difficulties against the principle of contradiction arise from the objects of sensory knowledge. If all things are changing, if there are no determinate natures, if everything is fluid and unstable, then nothing can be said of anything, or both being and not-being can be affirmed of anything, or both denied. But there is no reason to say that all objects are changing in every respect. That which endures is being, and the being which endures is opposed to that which ceases to be or passes away. Even of that which changes we can say that it is not simple but complex; that it is partly this and partly that; that it has a subject of change; that it has a mover by which it is moved; that what already is does not become. Furthermore, the senses do not perceive that objects both are and are not at the same time and under the same aspect; nor are we able interiorly to affirm and deny the same thing at the same time and under the same aspect. If our terms mean anything, for example, if the term 'man' means a biped, we cannot at the same time and under the same aspect think of him as non-biped,

nor can we deny both biped and non-biped of the same thing at one and the same time. But if we do not admit that our terms mean anything definite, excluding its contradictory, then we are merely making sounds or traces, not manifesting our understanding.

The Order of our Primitive Concepts

We have seen that the human intellect first apprehends its common object called being; then not-being, which is known by opposition to being; then the principle of contradiction: being is not not-being. In this very act of dividing not-being from being we know distinction. Next we observe that this or that being is undivided in itself, and thus we know it as a unity or one. We perceive that this one is divided from another one, and thus we know plurality or many beings, each of which is one. We cannot understand many without understanding one; nor can we understand one without knowing division or negation; nor division without not-being, nor not-being without being.[7]

Furthermore, we are aware more or less explicitly that our knowledge and its object are not simply identical, but are somehow distinct. This opposition between knowledge and its object is connoted by the very term 'object' of knowledge which means something opposed to knowledge. Knowledge itself is an act and a being, but its object may be a being or it may be not-being. Not-being as an object of knowledge is distinct from the being or act of knowing. Our knowledge is distinct also from things of which we have direct knowledge. The distinction between our knowledge and the things of which we have direct knowledge is apparent when we make a judgment. When

[7] ". . . primum principium indemonstrabile est quod non est simul affirmare et negare, quod fundatur super rationem entis et non entis, et supra hoc principium omnia alia fundantur." *Summa Theol.*, I-II, 94, 2; also I, 11, 2 ad 4; *De ver.*, I, 1.

we judge that being is not not-being, or that being is something, or that this or that being has a determinate nature, the division or composition which we make in judging is on the side of knowledge, not in the things of which we have knowledge. Particularly in the tautological judgment concerning a subject of direct knowledge we are aware of the distinction between our knowledge and the thing. When we judge that this is this, that Peter is Peter, we use the same object twice, and thus we duplicate in knowledge something which is one in itself and which has its own being distinct from the being and act of our knowledge by which we know it.[8]

Our sensory experiences provide us with abundant materials and frequent occasions for realizing the distinction between our knowledge and the things which we know directly. We are aware of sensory things opposed to our knowledge and acting upon us. We cannot sense whenever or whatever we please, but require the sensible, present and acting upon the sense. We are aware of our own movements toward sensory things, or away from them, and of the changing appearances of things which correspond to changing distances. Thus by sense and intellect, particularly by judgment, our spontaneous realism is developed and strengthened. The facts of the matter can be ascertained by logical reflection on our acts of knowing, and we can discover the necessary order which prevails among our basic concepts and principles.

What is Truth?

From the vista of natural realism it is easy to see that the truth of knowledge is simply the known conformity between our knowledge and things. This conformity is known in judgment, not in simple apprehension. By mere apprehension an object is manifested to the knower, and the knower and object

[8] ". . . talis compositio est solum in intellectu, non in rebus." *In VI Met.*, 4, n. 1241.

known become somehow identical. There can be no question here of conformity, because conformity requires two items: a thing is not conformed to itself but to something else.[9] In simple apprehension we have only one, because knower and object known are somehow identified. But when we reflect upon our apprehensions and make the judgment that the thing is as we know it, then we have two realities; namely, knowledge and the thing which we know, and we know the conformity of our knowledge with the thing.

Knowledge of the truth is a perfection which is proper to the intellect itself, and is found in that act in which the intellect has something proper to itself. The intellect has something proper to itself when it reflects on its own apprehensions and after comparing its knowledge with the things apprehended, it knows and asserts its conformity with things by judging them to be as it knows them to be. The truth itself of knowledge is this known conformity of the intellect with things. This truth is and is known only in the act of judgment. It cannot be found in mere apprehension, which takes place without reflection and without the knowledge of distinction. Nor is truth found intrinsically in sensory knowledge, because the senses cannot reflect or know their conformity with things.[10] Sensory knowledge is said to be true, as things are called true, not as truth is in the intellect. Truth is related to the intellect and is primarily and properly in intellectual knowledge because the intellect attains its object in itself, and its act of knowing is perfected in its own judgment. Things are called true, not by inherent truth, but by reason of their various relations to the truth of the intellect: they are the norms or standards for the truth of judgment, or they are themselves measured and determined by intellectual truth, as works of art depend upon the idea of the artist.

[9] ". . . aequalitas diversorum est." *De ver.*, I, 3.
[10] ". . . veritas non est in sensu sicut cognita a sensu." *De ver.*, I, 9.

What do We Mean by the Certitude of Truth?

The act of knowing a truth is somewhat like a movement, such as walking to a certain place. In regard to this movement we may be either in pure potency, or in imperfect act, or in perfect act. We are in pure potency if we have the sheer ability to walk but are not exercising it, or if we are not walking in the right direction: we may be taking great steps, but not to the right place. We are in imperfect act when we are beginning or continuing to move in the right direction, and in perfect act when we reach the desired place. Likewise with respect to truth we may be in pure potency, in imperfect act, or in perfect act.

We are in pure potency with respect to a truth inasmuch as we possess an intellect by which truth can be known but perhaps we cannot use the intellect, as during sleep; or simply do not know the particular truth. In this case we may be either in ignorance or in error. Ignorance is mere lack of the knowledge of a truth, which does not require any act, although we can also know our ignorance. Error is that state of mind in which we judge falsely, that is, we make a judgment which is not conformed to the thing concerning which the judgment is made, and we accept the false judgment as if it were true or conformed to the thing.

We are in imperfect act in regard to a truth when we are in doubt or possess only an opinion. Doubt is that state in which the mind fluctuates or swings between two contradictory terms without inclining more to one than to the other. A doubt is negative if we do not know or consider reasons either for or against; it is positive if the reasons for and against appear equal. Opinion is a definite intellectual assent given with respect to something which we think is so, excluding its contradictory, even while we know that it might be otherwise. This knowledge that the thing might be otherwise causes fear of error, and so opinion is judgment with fear of error.

We are in perfect act with respect to a truth when we are certain, or possess certitude. Certitude is that state in which the mind firmly assents to one part of a contradiction without fear of the opposite because we think that it cannot be otherwise. Thus certitude is primarily something subjective: a state of mind. As such it is called subjective certitude, whereas the objective basis, cause or reason which validates this state of mind is called objective certitude. Certitude which lacks an objective basis is said to be merely subjective; thus with merely subjective certitude we can accept the false for the true and be in error. When our certitude has an objective basis it is called formal certitude. By the certitude of truth we mean the perfect possession of truth, that is, judgment of something firmly made and held without fear of error because the objective basis assures us that the thing cannot be otherwise than we know it to be.

What are the Reasons for the Certitude of Truth?

The requirements for formal certitude are so strict that it is often doubted whether they can be fulfilled in significant matters. But we do have certitude with respect to the principle of contradiction: that being is not not-being; and we know that we cannot think otherwise in this case. The reasons for our certitude must be sought in the proportion of our act of knowing to the thing which we know. To know this proportion we must know the nature of the act and of the knowing power. From the fact that we know something, we know also our act, and from our act we know our power. Thus acts are known by their objects and powers by their acts. To determine the reasons for certitude we must look first at the objects which we clearly know, then at our act of knowing, and finally determine the nature of the knowing power.

We are aware that we do not by means of our knowledge itself produce the things which we know directly and primarily.

Particularly in regard to the things which we know most clearly, such as being and not-being or the whole and the part, we know that these things are distinct from our knowledge of them. We are aware that we are dependent upon them in order to know them, and that they are not dependent upon our knowledge in order to be.

The process of direct and primary knowing appears to be a peculiar kind of assimilation by which the thing known is and remains distinct from the knower and yet is somehow also in the knower.[11] The knower does not assimilate the thing known in a material way, or according to the natural mode of being, as we assimilate our food by changing it and incorporating it into our own substance. Yet the thing known is in the knower in a peculiar way, and knower and known become somehow identified.[12] Thus we see that there is another mode of being in addition to the natural mode of being by which things are what they are in themselves and distinct one from another. The knower leads a double life and has a double mode of being. The knower has its natural mode of being itself, but also the thing known is in the knower and identified with the knower according to another mode of being. The knower is itself according to its natural mode of being, and it is also the thing known according to this other mode of being, called intentional being. In this way a knower, such as a man or an animal, is distinct from a non-knower, such as a plant or a stone. The non-knower is limited to its natural mode of being: it is itself and no other. But the knower is not so limited. The knower is more ample, because it can become and can be everything which it can know.

In the process of direct and primary knowing we do not make the things which we know, but they come to us somehow from without and we assimilate them, not indeed materially

[11] "Intelligere est actus perfecti existens in ipso agente." *Summa Theol.*, I, 14, 2 ad 2.

[12] "Cognitio est secundum quod cognitum est in cognoscente." *Summa Theol.*, I, 16, 1.

but intentionally. Both sense and intellect are as blank pages on which nothing is written. In direct knowing we do not receive materially the things themselves which we know, but rather we receive a likeness of things by which we know them. Sense and intellect are in potency with respect to the primary objects of direct knowledge.[13] They are naturally apt to receive an image or likeness of things, and by means of this image they act and are, according to intentional being, the very things actually known.[14] Our powers of sense and intellect are passive, not active, with respect to their primary objects. Things are what they are, and they operate according to the manner of their own determinate being. Our powers of sense and intellect are naturally apt to become conformed to things. The intellect in particular can possess formal truth and certitude because it can reflect upon its act and upon itself and know that it is conformed to things, and know why it is conformed to things, namely, because it is a passive power which is naturally apt to become conformed to things which are as they are and cannot be otherwise: they cannot both be and not be at the same time and under the same aspect. These are the proper reasons for the certitude of truth in general namely, the passive nature of the knowing power and the being or evidence of things. It still remains to consider whether and to what extent we attain truth with certitude in particular cases.

A detailed critique of our knowledge in the light of these general principles and causes would be a long story. We can say here only a few words concerning the validity of our knowledge, both intellectual and sensory.

In regard to the first concepts and principles of intellectual

[13] "Utrumque est in potentia ad suum objectum, et est susceptivum ejus." *In III De anima*., 7, 9, 13.

[14] "Ipsi antiqui philosophi, quasi ab ipsa veritate coati, somniabun quodammodo veritatem. . . . Nescierunt distinguere illum modo quo res est in intellecta, sen in oculo, vel imaginatione, et quo res est in seipsa." *In I De anima*, 4.

knowledge, we either apprehend and judge correctly or we do not know at all. These basic concepts and principles, being and not-being, the whole and the part, are so simple, so universal and so evident that they are naturally and most certainly known. In regard to these basic concepts and first principles, the intellect is infallible. But in regard to more complex things and conceptions, and less evident judgments we can be in error, and sometimes are mistaken. However, the mistake does not come from the nature of knowledge, nor of the intellective power, which of itself is ordained to truth. Error comes by accident, through defective or inconsiderate apprehension. Still defective apprehension does not necessarily lead to error, because we can at least withhold our judgment if the conformity of our knowledge with things is not clearly seen; or if it is not known to be approximate or probable.

In order to understand the reasons for the validity of our sensory knowledge, we must differentiate between direct primary sensation and secondary sensation. Our primary sensory knowledge arises from the action of sensible things on the sense organs. The sensory powers are themselves passive, and the variously sensible things act upon the organs of sense to stimulate them, each in its own peculiar way according to its own mode of being and acting. The senses are passive in regard to their proper objects, not active. Hence in regard to their proper objects which are present and acting on the organs of sense, the senses are infallible. It is impossible for a proper sensible to appear to the senses as positively different from the way it really is, if it is present and exercising its natural mode of action upon the senses. However, we can be deficient in sensing in a mere negative way, because the sense is not always disposed to receive the complete action of the sensible thing. The action may be comparatively weak or strong or complex and thus difficult to sense. It may be communicated to us from a distance through a medium in which it can become modified or

distorted, as in the case of sound or color: we are aware of the distant thing only through something present and acting on the very organ of sense. If there is nothing present to the sense, or not acting on the sense, or not in the normal way, or not the proper sensible, or if the sense itself is lacking, then either we do not have primary sensation at all or we sense defectively and perhaps even deceptively. Yet defective sensation does not necessarily lead to error, because the intellect can consider and judge whether and to what extent the conditions and causes of valid sensation are present and operative.

Our secondary sensory knowledge results from primary sensation which has been somehow conserved and as such is subject to association, recall and recognition. Like all other knowledge, this is of its nature valid and reliable, as countless instances in ordinary experience testify: we recall and remember how things were, and when we meet them again we find them the same or only a little different. However, secondary sensation abstracts from the actual presence of the thing known, and is sometimes reproduced in a disordered, incomplete, and confusing way. Hence it can lead to erroneous judgment, but does not necessarily deceive us. In these matters we must judge with caution, or even withhold our judgment until we see things more clearly.

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Some Notes on Whether Logic is a Speculative or Practical Science

by Richard J. Connell

A LITTLE RESEARCH will show that some modern authors consider logic to be a practical science. Together with their followers these people constitute a group which is by no means a negligible number; their opinion is common enough to warrant attention. However, within the group there is to be found some variety in the reasons which are offered in support of the contention that logic is a practical science. Some writers hold that logic is practical because it is useful (obviously presupposing that every useful science is practical), while others argue that logic is practical because it "makes" or "does" something; or in other words, it is practical because it is ordered to a work. These two notions seem to predominate.[1]

We purpose in this brief essay to argue the case for the opposing view, namely, that logic is a speculative science; but in order to carry out our purpose we do not deem it necessary to enter into a comprehensive consideration of the distinction between speculative and practical knowledge.[2] We propose to

[1] The question of whether logic is speculative or practical is not one which has been treated at great length by the writers to whom we refer. However, some of those who have spoken briefly but explicitly on the subject are the following: P. Coffey, *The Science of Logic* (New York, 1938), I, pp. 14-16; Henri Renard, *The Philosophy of Being* (Milwaukee, 1943), p. 7; Gerard Smith, *Natural Theology* (New York, 1951), pp. 2-3.

[2] It seems advisable at this point to indicate where the reader who is so inclined can find a more complete consideration of speculative and practical knowledge. However, instead of listing the sources ourselves we would like to economize by referring the reader to *Connaissance spéculative et pratique*, by Jean Pétrin (Ottawa, 1948). We are only superficially acquainted with the *corpus* of this work, but the book does contain an appendix of the fundamental texts of St. Thomas, and a good bibliography of contemporary writings on the problem.

limit our discussion to the questions 1) whether every useful science is practical; 2) whether every science that is ordered to a work is practical.

Apropos of the first question we should note that, considered under the formality of good, human disciplines are subject to a twofold distinction: 1) those which are *useful*, and are sought in view of something other as an end; 2) those which are *good in themselves*, and which are pursued for their own sake. Now few will deny that the disciplines which are sought *propter se* are those which we call speculative; and since it is ordinarily practical knowledge that is opposed to the speculative, it would seem that these two divisions of knowledge coincide. On the surface it appears to be true that every useful discipline is practical.

In the beginning of his *Metaphysics*,[3] Aristotle remarks about wisdom that "we pursue this [wisdom] as the only free science, for it alone exists for its own sake." St. Thomas, in his commentary on this passage,[4] observes that the proposition "this is the only free science" can be interpreted in two ways: first, as referring to the *genus* of speculative science; and as thus understood it is true that only the speculative disciplines are pursued for their own sake; or secondly, it can be taken to refer to the science of metaphysics; and interpreted in this manner, too, the proposition is true. For, as St. Thomas remarks, all the other sciences are ordered to wisdom as their end; metaphysics alone is "maxime propter se." The other natural disciplines, although some have a certain goodness in themselves, are ordered to metaphysics either with respect to the *esse* or the *bene esse* of the latter.[5] Even mathematics and the philosophy of nature are not pure ends, for to the extent that these sciences are for the sake of metaphysics they are *ad finem*—they are

[3] *Met.*, A, 2, 982b 27-28 (Oxford edit.).

[4] *In I Met.*, 3, ed. Cathala, nn. 58-59.

[5] St. Thomas, *In Boeth. de Trin.*, V, 1, ad 9 (ed. P. Wyser [Fribourg, 1948]).

means to an end. Metaphysics alone among the natural disciplines is in no way ordered to another as its end. Wisdom is, therefore, " maxime propter se."

Now if speculative science is characterized by the truth which is sought for itself, and if the truth of every discipline other than metaphysics is to some extent on account of the latter, it would appear that no science but metaphysics is perfectly speculative. And if " practical " is equivalent to " useful " it seems that even mathematics and the science of nature can be called practical insofar as each is a *bonum utile* in the acquisition of metaphysics. But although the *ratio* of speculative science is not perfectly realized in mathematics and the philosophy of nature, nevertheless, the latter sciences belong to the genus of speculative knowledge. Even though they are not " maxime propter se " they are, nonetheless, good in themselves; they can be pursued as ends.

At this point we should note that those who hold logic to be practical are as one in admitting the speculative nature of mathematics and the philosophy of nature. But this leads to a rather obvious difficulty. It is inconsistent to assign *utility* as the *ratio* of practical knowledge and at the same time to deny that, insofar as they are useful for learning metaphysics, the philosophy of nature and mathematics are practical. On the other hand, if it is conceded that the lesser speculative sciences *are* practical to the extent that they are means to the acquisition of metaphysics, then cognizance should be taken of the fact that the term " practical " has a new imposition, an imposition that is not employed by St. Thomas when he distinguishes the two orders of knowledge. And if St. Thomas is to serve as a teacher it is necessary to know with precision how he employs his terms and the foundations for the distinctions he makes. But the burden of proof is upon us; we must make good our assertion that St. Thomas does *not* equate " practical " with " useful."

In the *Questions Disputatae de Veritate*, question 3, article 3.

St. Thomas makes a distinction familiar to all. He remarks that "the practical intellect differs from the speculative intellect by its end; for the end of the speculative intellect is truth absolutely, whereas the end of the practical intellect is operation. . . ."[6] And on the occasion of another question, he adds something which is pertinent to the proper understanding of the above doctrine:

> . . . a habit of the speculative intellect is ordered to its proper act, which it perfects, and which is the consideration of the true; for it is not ordered to some exterior act as its end, but has its end in its proper act.
>
> However, the practical intellect is ordered to an exterior act as its end: for the consideration of doing and making does not pertain to the practical intellect except on account of the doing and the making. . . .[7]

The speculative intellect and its habits are ordered to intellectual operation as their end. They seek truth for its own sake. But the practical intellect is ordered to an operation exterior to itself as its end. This latter power considers what is to be done and what is to be made for the sake of the doing and the making, both of which are operations exterior to the intellect. The *verum absolute* is the object of the speculative intellect; it is also the *end* of this power. The object of the practical intellect, however, is the *verum relatum ad opus*,[8] which is not an end but a principle. The object of the practical intellect is *ad finem*, and the *end* to which it is related is an operation

[6] ". . . intellectus practicus differt a speculativo fine; finis enim speculativi est veritas absolute, sed practici est operatio. . . ."

[7] *De Virt. in Comm.*, 7, ad 1. ". . . habitus intellectus speculativi ordinatur ad actum proprium, quem perfectum reddit, qui est veri consideratio; non autem ordinatur sicut in finem in aliquem exteriorem actum, sed finem habet in suo actu proprio.

"Intellectus autem practicus ordinatur sicut in finem in alium exteriorem actum: non enim consideratio de agendis vel faciendis pertinet ad intellectum practicum nisi propter agere vel facere."

[8] St. Thomas, *De ver.*, XXII, 10, ad 4.

exterior to reason. The object and end of the practical intellect are distinct.

But it might seem that our interpretation of "exterior act" is erroneous, for an act of one science can be called exterior in relation to the act of another science even when both of these operations belong to the same power. Hence, it might appear that what distinguishes speculative habits from those which are practical is the lack of ordination to *any* further act, either interior or exterior to the reason. However, following St. Thomas we can point out that ". . . *the speculative intellect*[9] is not ordered to something outside itself; for it is ordered to its proper act as its end."[10] The speculative *intellect* as such is not ordered to something extrinsic to itself, and "exterior" must be understood as exterior to the *power*. Hence, the speculative habits are characterized by their lack of ordination to an operation exterior to the speculative *intellect*. The latter remains within itself, whereas the practical intellect, because it is ordered to another faculty, in a certain manner (insofar as it has an effect *extra se*) passes into the other power which is its end. Consequently, when the speculative and practical intellects are opposed by virtue of the latter's ordination to an operation, the operation in question is one which proceeds from a faculty exterior to the reason.

The same distinction can be made in regard to the *opus* of practical knowledge, which concerns the second question we promised to discuss. When St. Thomas says that practical knowledge is ordered to a work, the work of which he speaks is exterior to the intellect:

> . . . there is a twofold work: namely, exterior and interior. The practical or operative, which is divided against the speculative, is taken from the exterior work, to which the speculative habit is not ordered.

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[9] Italics are mine.

[10] *De Virt. in Comm.*, 7, ad 4. ". . . intellectus speculativus non ordinatur ad aliquid extra se; ordinatur autem ad proprium actum sicut ad finem."

But nevertheless it has an order to the interior work of the intellect, which is to know the true.[11]

In the mind of St. Thomas both an operation and a work are denominated practical by reason of their ordination to something extrinsic to the intellect. It is not sufficient that they be useful, for utility extends beyond the practical into the speculative order. It is true to say that every practical science is useful, but it cannot be held that every useful science is practical. Thus, no science whose proximate end is an operation of the intellect, or whose work is within the intelligence can properly be called practical.[12] And because logic is a science which is ordered to the operation of the intellect, even though it is useful it is not practical. Logic must, therefore, be classed among the speculative disciplines.

But although rational science cannot be called practical, neither is it perfectly speculative; it belongs only reductively to the genus. For as St. Thomas notes, logic bears on things of which "knowledge is sought not for their own sake, but as a certain aid for the other sciences."[13] Rational science differs from the other speculative disciplines inasmuch as it is a pure

[11] *Summa Theol.*, I-II, 57, 1, ad 1, (ed. Leonine). ". . . duplex est opus: scilicet exterius, et interius. Practicum ergo, vel operativum, quod dividitur contra speculativum, sumitur ab opere exteriori, ad quod non habet ordinem habitus speculativus. Sed tamen habet ordinem ad interius opus intellectus, quod est speculari verum."

[12] It is, of course, that to which a science is *immediately* ordered which specifies it. Painting is not speculative because the work which it produces is ordered to the intellect. Similarly, apart from any consideration of the mode proper to practical knowledge, logic could not be called practical simply because in some way it might be employed in considerations belonging to practical science.

[13] *In Boeth. de Trin.*, V, 1, ad 2. ". . . Res autem de quibus est logica, non quaeruntur ad cognoscendum propter seipsas, sed ut adminiculum quoddam ad alias scientias. Et ideo logica non continetur sub speculativa philosophia quasi principalis pars, sed sicut quoddam reductum ad philosophiam speculativam, proud ministrat speculationi sua instrumenta, scilicet syllogismos et definitiones et alia huiusmodi, quibus in scientiis speculativis indigemus."

bonum utile. Unlike metaphysics, mathematics and the philosophy of nature, logic is not to any extent good in itself. Whatever goodness this discipline has comes from its end. The very object of logic, beings of the reason, precludes its being anything but a pure means to an end. Hence, logic is only reductively speculative, and it may not be considered a principal part of the genus.

However, to maintain that rational science belongs reductively to the genus is not equivalent to saying that it is *simpliciter* practical, anymore than to classify matter and form as reductively in the genus of substance is to say that the latter are *simpliciter* accidents. Two things belong to the *ratio* of substance: *per se* existence and completeness of species. Neither of these is realized in substantial form or prime matter (except for the human soul, of course, which exists *per se*), but because both of them are principles of substance they are placed in that same genus; they belong to the category by reason of another, the substance which they constitute. Similarly, the *ratio* of speculative science is not realized in logic, considered in itself. Logic belongs among the speculative sciences because it is an instrument of intellectual operation; and "every instrument," says St. Thomas, "must be defined from its end, which is the use of the instrument. . . ." [14] Furthermore, logic is the instrument of a *speculative* intellectual operation (i. e. it is not an instrument of practical knowledge insofar as the latter proceeds compositively), for its purpose is to teach the rules of definition and demonstration. But to proceed by definition and demonstration is to proceed in a resolutive mode, the mode proper to speculative science.[15] Thus, not only is logic an instrument of the intellect, it is more particularly an instrument of speculation, and for that reason is itself a speculative science.

[14] *In I Periherm.*, 7, n. 2, (ed. Leonine). "Omne autem instrumentum oportet definiri ex suo fine, qui est usus instrumenti. . . ."

[15] St. Thomas, *Summa Theol.*, I, 14, 16, c.

In closing, we can observe that for St. Thomas "useful" and "practical" are not equivalent in meaning. "Practical" denominates a discipline whose end is extrinsic to the reason, whereas "useful" implies no such limitation. And if modern usage equates the two words, it should be noted that in so doing modern usage departs from the traditional philosophical signification of the terms.

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DISCUSSION:

Aristotle on Natural Place: Some Questions

by Robert R. Barr, S.J.

In his valuable study of "Space and Gravitation"[1] the Rev. Dr. James A. Weisheipl, O.P., discussed Aristotelian "natural place" as the final cause of natural motion. Father Weisheipl maintains that

(1) Aristotle himself considered natural place to be the final cause of "natural motion";[2]

(2) Aristotle considered this final cause to be some absolute region of the universe, independently of its character as a "suitable environment";[3]

(3) natural place (not as absolute region, but as a "suitable environment" for bodies) and its final causality are indeed a realistic and legitimate explanation of reality—especially of the phenomenon known as "gravitation."[4]

I should like to make some observations on these positions, as their philosophical interest is considerable.

Did Aristotle think that natural place is a final cause?

If Aristotle thought that place could be a final cause, then why did he say the following?

Also we may ask: of what in things is space [τόπον] the cause? None of the four modes of causation can be ascribed to it. It is neither cause in the sense of the matter of existents (for nothing is composed of it), nor as the form and definition of things, *nor as end*, nor does it move existents.[5]

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[1] The New Scholasticism, XXIX (1955), 175-223.

[2] *Ibid.*, e.g., pp. 183, 193.

[3] *Ibid.*, e.g., pp. 183-86.

[4] *Ibid.*, e.g., pp. 182-83, 185-86, 193.

[5] *Physics* iv. 1. 209 a 18-22 (Oxford translation, here as throughout; italics mine). The Oxford "space" is poor, and could be misleading.

Surely this text is more explicit than the ones which can be cited in *favor* of a real finality for place.[6] I should like to ask Father Weisheipl how this text can be reconciled with his assertion that Aristotle held a final causality for natural place.

Of several possible explanations, it seems, each is attended with difficulties. For instance:

Since the text appears in a list of *preliminary arguments* concluding falsely to the nonexistence of place,[7] perhaps it does not represent Aristotle's own opinion. But the obvious fact that Aristotle does not accept the *conclusion* of the arguments does not necessarily mean that he rejects the *premises*—on the contrary, he is clearly attempting to list the most convincing "videtur-quod-nons" he can think of, and many of the *other* premises state his own doctrine. Besides, if we argue that the text is not a report of Aristotle's own mind we shall have to apologize to such eminent commentators as Philoponus,[8] Simplicius,[9] St. Thomas,[10] and Bergson[11]—each of whom attempts to explain the

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[6] The nearest Aristotle comes to an explicit avowal of finality for natural place is, I think, *ibid.*, 208 b 8-11: ". . . the typical locomotions of the elementary natural bodies—namely, fire, earth, and the like—show not only that place is something, but also that it exerts a certain influence [τινὰ δύναμιν]."

Father Weisheipl cites St. Thomas's commentary on this text in support of finality for place ("Space and Gravitation," p. 183) and St. Thomas does indeed speak of it here: ". . . sicut finis dicitur attrahere" (*In IV Phys.*, 1 [ed. A. Pirotta (Naples, 1953), n. 794]); but in his commentary on the "nor as end" text (209 a 18-22) St. Thomas says ". . . locus non potest esse causa secundum aliquem quatuor modorum . . . neque iterum sicut causa finalis rerum, quia magis videntur esse loca propter locata quam locata propter loca . . ." (*ibid.*, 2, n. 808).

Incidentally, St. Thomas does not think that δύναμις is *necessarily* a very strong word in this context (he read "potentia"): "Quaecumque autem secundum se habent determinatas positiones, necesse est quod habeant potentias quibus determinentur: alia enim est in animali potentia dextri et alia sinistri. Unde relinquitur [*a fortiori*, perhaps, granted] quod locus sit et habeat aliquam potentiam" (*ibid.*, 1, n. 797).

[7] *Physics* iv. 1. 209 a 4-29. The "influence" text, by the way, itself appears in a list of merely preliminary arguments—taken from "popular opinion" H. Bergson, *Quid Aristoteles de Loco Senserit* (Paris, 1889), pp. 3, 7.

[8] *In IV Phys.*, 209 a 2 (ed. H. Vitelli, *Commentaria in Aristotelem Graeca* [Berlin, 1888], Vol. XVII, pp. 509-510).

[9] *In IV Phys.*, 209 a 18 (*Commentaria Graeca*, Vol. IX, p. 533).

[10] *In IV Phys.*, 2, n. 808.

[11] *Aristoteles de Loco*, pp. 12-13.

whole of 209 a 18-22, including the "nor as end" clause, on honest Aristotelian principles.

Or perhaps Aristotle is denying the finality of place simply as locative, apart from its character as *natural*. But at least it must be admitted that *every* place is natural with respect to *some* body and motion;[12] and the commentators would be opposed to this new solution too—Philoponus,[13] Simplicius,[14] and Bergson[15] are clearly considering *natural* place in their explanations. At any rate, the burden of proof will accompany the assertion of a qualification not explicitly justified by the text.

Or perhaps Aristotle is rejecting finality for natural place as a *containing boundary*, but not as a natural *region* of some sort—because *such a container cannot pre-exist* a motion, therefore cannot cause it,[16] whereas a *region can* do so. But no, Aristotle includes the notes of natural place[17] among the "attributes"[18] he means to satisfy with his definition of place as "*the innermost motionless boundary of what contains.*"[19]

I do not claim to have dislodged conclusively the finality of natural place in Aristotle's physics. (Indeed, if we must give up natural place as a final cause, then what *is* the immediate ontological finality of natural motion for Aristotle?[20] How would he defend the constant tendency of an agent toward something which would not really be the final cause of its tendency?) But surely the text I have cited and the difficulties of any interpretation but a literal one require a more thorough textual defense of natural place as final cause than Father Weisheipl has given us in his article.

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[12] *De Caelo* i. 9. 278 b 33-34.

[13] *In IV Phys.*, 209 a 2 and 209 a 18 (*Commentaria Graeca*, Vol. XVII, p. 509, and p. 512).

[14] *In IV Phys.*, 209 a 18 (*Commentaria Graeca*, Vol. IX, p. 533).

[15] *Aristoteles de Loco*, pp. 12-13.

[16] These are the grounds on which Bergson thinks Aristotle did not hold finality for even natural place (*ibid.*).

[17] *Physics* iv. 4. 211 a 3-6.

[18] *Ibid.*, 211 a 9.

[19] *Ibid.*, 212 a 20.

[20] Perhaps *esse in loco* rather than *locus* itself? ". . . The movement of each body to its own place is motion towards its own form" (*De Caelo* iv. 3. 310 a 33-b1)—now, *place* is extrinsic and cannot be the form of the *locatum* (see *Physics* iv. 1. 209 b 22-24), but to be in place is an accident of the *locatum*, one of the predicaments. Cf. Simplicius, *In IV Phys.*, 209 a 18 (*Commentaria Graeca*, Vol. IX, p. 533).

Did Aristotle posit finality in place as an absolute region?

Father Weisheipl maintains that for Aristotle, natural place as a final cause is a region of the universe taken absolutely, independently of its character as a suitable physical environment.[21]

Now, whether or not Aristotle really absolutized place,[22] and assuming for the moment that natural place for him is indeed a final cause, at least we should not say that he attributed finality to natural place precisely *qua* absolute region—because the two doctrines are never posited together: I do not think that any support for a genuine, ontological finality for place can be found in the *De Caelo*,[23] nor that Aristotle absolutizes place in the *Physics*;[24] and there is evidence of considerable doctrinal development between the two works.[25]

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[21] See n. 3.

[22] Father Weisheipl points to the *De Caelo* as the work in which Aristotle "reduces [place] to a fixed position in the universe" ("Space and Gravitation," p. 185)—for instance, I suppose, in i. 8. 276 a 22-277 a 12; ii. 4. 287 a 30-b14, 14. 296b6-297b14.

I should like to suggest that Aristotle might not be absolutizing place here, but simply pointing out *the only way he thinks all earth can be separated by all water from all air and fire without either a (1) non-spherical or (2) spherical-but-eccentric universe*—these being impossible not because of absolute place but respectively (1) for the reasons given *ibid.* ii. 4. and (2) because equal portions of each element will of course have equal natural tendencies and will therefore tend to arrange themselves spherically (cf. *ibid.*, iv. 13. 296 a 12-16). I cannot find any texts in the *De Caelo* which seem necessarily incompatible with this interpretation.

It must be admitted, however, and kept in mind, that Aristotle does indeed posit the independenec of the natural region from its *own* contents—but without releasing it from its dependence on the *adjacent elements* (*ibid.*, iv. 3. 310 a 29-b15). This could be the ultimate explanation of ii. 14. 296 b 6-27 and iv. 4. 312 a 1-3. Secondly, the influence of the adjacent elements is not equal (*ibid.*, iv. 5. 312 b 2-19 [esp. b 18-19], ii. 4. 287 b 4-6, iv. 4. 311 b 8-13). Finally, what I have called "dependence on the adjacent element" will not always result in a motion *towards* that element (*ibid.*, iv. 4. 311 b 4-9, 5. 312 b 4, 14-16). This last, admittedly, is difficult—but not impossible, as the explanation could even be that Aristotle simply never worked out a reconciliation of the doctrine expressed in these latter texts with his peculiar version of the "like attracts like" theory (*ibid.*, iv. 3. 310 a 29-b 15).

[23] The Oxford "goal" means simply *terminus ad quem* (even, clearly, *ibid.*, i. 8. 277 a 26 [τέλος]).

[24] In fact, quite the contrary: see *Physics* iv. 5. 212 b 29-213 a 10, and St. Thomas's commentary on these texts (*In IV Phys.*, 8, n. 938-44).

[25] See for instance W. Guthrie (tr.), *Aristotle on the Heavens* (Loeb edit. of *De Caelo*: London, 1939), "Introduction," pp. xv ff.

Is the doctrine of "natural place" suitable as an explanation of reality?

Since the first dependency of every body is upon its immediate environment, it must seek a suitable environment in which to thrive. . . . A human being will adapt the environment . . . or else move elsewhere. Birds fly south . . . different flora are found in different climates. . . . An analogous situation must explain the falling of bodies to the earth and stability thereon . . . locomotion is inexplicable without natural places. . . . A natural place is essentially a qualitative environment which is congenial to a particular nature and to which that nature spontaneously moves.

. . . . . .

When that nature is not in a congenial habitat, it spontaneously moves to the nearest place conducive to its well-being and fulfillment as a physical reality. The natural environment attracts bodies . . . as fulfillment attracts the incomplete.

. . . . . .

. . . The Aristotelian theory of nature and gravitation offers a realistic basis and justification for the theory of relativity in its essential content.[26]

How can these assertions be reconciled with the facts of modern astronomy? If bodies "spontaneously seek out the nearest suitable environment,"[27] then which environments are being sought out by the bodies on the periphery of our expanding universe? They are flying truly *no place*, if "place" be taken to mean physical environment. Why do we not have a contracting universe instead?

An appeal to a diversity in the *agencies* involved is unavailing, since the bodies of outer space move like those of our more immediate experience—they obey the same "laws of motion." In other words, since both groups of bodies move similarly, the agency of their motions must be (or have been) similar. If either receives its motion from without, then so must the other, and the "spontaneity" of "natural motion" vanishes.

ROBERT R. BARR, S. J.

Saint Louis University,
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[26] J. Weisheipl, O. P., "Space and Gravitation," *art. cit.*, pp. 182-83, 186, 223.

[27] *Ibid.*, p. 183.

Aristotle on Natural Place: A Rejoinder

by James A. Weisheipl, O.P.

THE NEW SCHOLASTICISM has very graciously invited me to comment on the objections raised by Robert R. Barr, S. J., concerning natural place and its function as final cause in natural locomotion. The brevity of my comments is intended to express my sincere gratitude. Mr. Barr does not propose a view of his own to explain actual motions in the world, but he raises certain objections to accepting natural place as a hint of an explanation. These objections concern three questions.

i. *Whether Aristotle considered natural place as the final cause of natural motion.*

The question concerns the final cause of *motion* and not of *bodies*; neither I nor anyone else to my knowledge would claim that natural bodies exist for the sake of place. Mr. Barr's main objection is that Aristotle in *Physics* IV, 1, 209 a 18-22 seems to reject the idea of place as a final cause; further, nowhere does he explicitly affirm it. The passage quoted by Mr. Barr is actually one of six objections raised by Aristotle to the reality of place. Four of these objections are explicitly answered in Chapter 5, 212 b 23-213 a 3. But Aristotle did not consider it necessary to answer the remaining two, because, as St. Thomas rightly observes, no one holds place to be an element or cause of things: "non enim a ponentibus locum, sic ponitur quasi elementum vel causa rerum."[1] On the other hand, in his discussion of Plato's doctrine of space Aristotle goes to great lengths to show that place is "neither the form nor the matter nor an extension."[2] Nevertheless in his own doctrine Aristotle asserts that a body is related to its natural place as potency to act, as a "separable part to its whole," as matter to *form*.[3] Consequently Aristotle does consider place to be one of the *causes* raised in the objection, but not precisely as the objection intended. As for final causality Aristotle merely states in the objection that place

[1] St. Thomas, *In IV Phys.*, 8, n. 1.

[2] Aristotle, *Phys., IV*, 4, 212 a 2-3; cf. 209 a 31-210 a 13.

[3] *De Coelo*, IV, 3, 311 a 4-14; *Phys.*, VIII, 4, 255 a 29-30; IV, 5, 212 b 34-213 a 3; also *De Coelo* IV, 3, 310 a 33-b1, quoted, but misunderstood by Mr. Barr in his note 20.

cannot be a cause "as end." But St. Thomas makes out a very good case: "quia magis videntur esse loca propter locata, quam locata propter loca." [4]

Briefly, 209 a 18-22 is an objection and as such nothing can be constructed from it. Indeed the eminent commentators explained this objection, as well as others, "on honest Aristotelian principles," and strengthened it wherever possible. But the fact remains that this objection deals with place as a cause of *things*, whereas I am concerned with natural place as a cause of *motion*. True, Aristotle went further and saw in natural place a kind of *form*, an *act*, a certain *perfection* of the body when it attained its natural place.

Further, the whole of Aristotelian physics rests on the notion "natura agit propter finem." [5] Without some end as *bonum* and *desiderabile* actually intended, not only could no motion take place, but the whole Aristotelian notion of φύσις is nonsense. When Aristotle says that the reason "for the motion of light things and heavy thing to their proper situations" is that "they have a natural *tendency* respectively towards a certain position," [6] he is plainly saying that bodies *intend* an end, namely *esse in loco particulari*. Mr. Barr's objection that *esse in loco* is an accident of the *locatum* (*supra*, n. 20) does not militate against the final causality of place, any more than the possession of any end militates against final causality. The possession of an end certainly is accidental, a predicament.

Furthermore, Aristotle's view of place is brought out clearly in his rejection of the vacuum postulated by Democritus, Leucippus, and in a certain sense by Plato to explain natural motions. [7] If physical motions take place in a void, then why do certain bodies move down and others upward? "For there is no place to which things can move more or less than to another; since the void in so far as it is void admits no difference." [8] But Aristotle's *plenum* does contain qualitative differ-

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[4] *In IV Phys.*, 2, n. 5. Averroes, surprisingly enough, tries to give the answer together with the objection when he says that by "end" Aristotle here means intrinsic form, because it will be explained later that place is "tanquam finis extrinseca in corporibus simplicibus." (*In Phys.*, IV, comm. 11) Averroes unnecessarily tried to embrace too much in his exposition of this passage.

[5] With qualifications this statement would be called an analytic proposition in contemporary terminology.

[6] *Phys.*, VIII, 4, 255 b 14-16.

[7] Cf. *Phys.*, IV, 7, 214 a 23-25; 8, 214 b 28-30.

[8] *Ibid.*, 214 b 34-35.

ences and can suffer qualitative changes, as he clearly points out in *Physics* IV, 7, 214 a 26-28. That is to say, the qualitative differences of natural place can explain *why* different bodies seek different positions, i. e., end of motion toward it and rest in it.

There can be no doubt that the major commentators and the scholastics understood natural place to be the final cause of natural motions,[9] although already in the 14th century certain scholastics tended to forget that final causality is the desire for the *good*.[10]

ii. *Whether Aristotle posited finality in place as an absolute region.*

Mr. Barr has misunderstood my point here. I did not say that Aristotle "attributed finality to natural place precisely *qua* absolute region." Nor did I say that he considered natural place "independently of its character as a suitable physical environment." Obviously Aristotle considered the universe as a *plenum* with qualitative differences. What I did say was that Aristotle tended to conceive the *immobilis* (*ἀκίνητον*) part of the definition too rigorously. I should not have thought there was any doubt about this, but rather about whether I am justified in rejecting an absolute view of *immobilis*. Aristotle's concentric spheres of the sub-lunar regions are too well known to need repetition, but Mr. Barr's explanation (*supra*, n. 22) hardly seems satisfactory. Aristotle was concerned with explaining actual motions in the universe, and not merely with separating the elements by concentric spheres. But it would seem that Aristotle implied more than was justified in his arguments against the plurality of universes[11] and in identifying the center of the earth with the center of the universe.[12] Aristotle seems clearly to "spatialize" unnecessarily in the following argument:

[9] Mr. Barr even seems to doubt St. Thomas' teaching on this point, but it is clearly stated throughout his works, e.g., *Summa Theol.* I-II, 36,2: "sicut descensionis corporis gravis causa sicut finis est locus deorsum"; *In* XII *Metaph.*, 2, n. 2627: "Est enim finis extrinsecus ab eo quod est ad finem, sicut dicimus locum esse finem eius quod movetur ad locum"; *In* I *De Coelo*, IV, n. 5: ". . . ultimum complementum quod est in consecutione finis, quia est locus conveniens et conservans." See also *In* IV *Phys.* 1, n. 7; 8, n. 6; I *De Coelo*, 12, n. 4; 17, n. 8-9; *Sum. cont Gent.*, III, 22-23; *De pot.*, 5, 5.

[10] Cf. A. Maier, *Metaphysische Hintergründe der spätscholastischen Naturphilosophie*, Kap. V, "Finalkausalität und Naturgesetz" (Rome, 1955), pp. 273-335.

[11] *De Coelo* I, 7-9; cf. Duhem, *Le Système du Monde* I, 230-241.

[12] *De Coelo* II, 14; cf. Duhem, *op. cit.*, I, 215-230.

> If one were to remove the earth to where the moon now is, the various fragments of earth would each move not towards it but to the place in which it now is. (*De Coelo* IV, 3, 310 b 1-4.)

And it is this "spatialization" of place (if such it be), this conception of place as absolutely *immobilis*, which I have suggested as logically unjustified.

Whether or not Mr. Barr agrees with my interpretation of Aristotle on this point, he seems inclined to agree with my conclusion: that the conception of place as *immobilis absolute et simpliciter* has no meaning in science.

iii. *Whether the doctrine of "natural place" is suitable as an explanation of reality.*

The burden of the whole of "Space and Gravitation" was to prove that the final causality of natural place can explain the phenomenon of gravitation, while the theory of mutual attraction cannot. It is true that there are many difficulties involved in the doctrine of natural place, but there are also great difficulties in many other doctrines, such as that of matter and form, the immortality of the soul, and the existence of God. The task of science is not to reject truths because of difficulties, but to cling to what is better known and to work toward the solution of difficulties. Mr. Barr raises only one difficulty, and this the weakest of them all. In the first place, the theory of the expanding universe is a tentative hypothesis put forward to explain the shifting of the spectrum of the spiral nebulae towards the red. The theory of the expanding universe to explain this spectral phenomenon is by no means universally accepted by astronomers, for there are other explanations. Therefore a tentative hypothesis is not a sufficient reason for rejecting the *more* certain doctrine of natural place.

Secondly, even if the expansion of the universe were a proved fact of astronomy (as much as such facts can be proved), this would not be an argument against natural place as a terrestrial explanation. But Mr. Barr objects that the bodies of outer space must obey the same "laws of motion" as those of our more immediate experience. The term "laws of motion" is ambiguous. If one means mathematical laws of motion, then the statement may be true; at least it is the aim of modern physics to discover the same mathematical laws. But if one means philosophically physical laws, then the statement is not necessarily true at all. (In the near future I hope to publish a new text of

St. Albert together with a study of celestial motions; there is still a great deal of obscurity about the medieval notions of celestial motions and their relevance to modern physics.) Mr. Barr presents the strongest argument when he says if bodies of outer space receive their motion from without, then so must terrestrial. However not only is the antecedent not proved, but the argument does not necessarily follow: it all depends on the kind of motion involved. But it goes beyond Mr. Barr's premises to conclude, "And the spontaneity of natural motion vanishes."

Oxford University,
Oxford, England

From the Secretary's Desk

The Association Honors Dr. Ignatius Smith

THE AMERICAN Catholic Philosophical Association has joined with friends of Rev. Dr. Ignatius Smith, O. P., from various parts of the country and at the Catholic University of America to honor him at a dinner at the Willard Hotel on Saturday evening, April 7, 1956, to commemorate the completion of his fiftieth year as student and teacher at the Catholic University of America. Dr. Smith was a member of the original Executive Council of our Association, a past vice-president and president, and is a charter and life member of the Association. He was born on August 23, 1886. He came to Catholic University as a theological student in 1906 at the Dominican House of Studies. He was ordained in 1910 and received his Ph. D. degree from the University in 1915. He was appointed to the faculty in the Department of Philosophy in 1920 and became Acting Dean in 1933 and was elected Dean in 1937, a position which he will continue to hold until August 23, his seventieth birthday, when he will retire as professor emeritus. Dr. Smith was editor-in-chief of The New Scholasticism, the official journal of the Association, during the ten year period from 1937 to 1947. By order of the Executive Council and in behalf of the members of the Association an engraved copy of the following resolutions was presented to Dr. Smith at the dinner in his honor:

Resolution for Dr. Smith

1. Whereas, the Very Reverend Doctor Ignatius Smith of the Order of Preachers is completing fifty years of association with the Catholic University of America; and

2. Whereas Doctor Smith, apart from his technical contribution to American and world philosophy, has distinguished himself as a faithful son of Saint Dominic and as a loyal disciple of Saint Thomas Aquinas; and

3. Whereas, Doctor Smith has, by his work as a priest, teacher, writer, and person put an indelible mark upon philosophy throughout the world; and

4. Whereas Doctor Smith, by virtue of his editorship of The New

SCHOLASTICISM, during a period of ten years, his vice-presidency and presidency of the American Catholic Philosophical Association, his two terms as member of the Association's Executive Council, and his active participation as a charter and life member, has rendered outstanding service to the Association;

Therefore, be it resolved that the Executive Council of the Association on behalf of all the members, offer its congratulations to Doctor Smith on his magnificent achievements; and

Be it further resolved, that the Association express its gratitude for the outstanding service of Doctor Smith to the Association in particular but in general to the whole cause of philosophy; and

Be it further resolved, that the secretary arrange for a Mass of thanksgiving to God for the contributions of Doctor Smith to the Catholic intellectual world; and

Be it further and finally resolved that this resolution be prepared in an appropriate scroll and presented to Doctor Smith in testimony of our congratulations and thanks and that the resolution be published in THE NEW SCHOLASTICISM and in the *Proceedings*.

At the dinner in his honor Dr. Smith was also awarded the Cardinal Gibbons Medal given annually by the Catholic University of America Alumni Association to an individual who has made outstanding contributions to the service of the Church or the country. The Alumni Association will also give the University a bronze bust of Dr. Smith.

NATIONAL MEETINGS OF THE ASSOCIATION

By the time this issue of THE NEW SCHOLASTICISM is distributed the thirtieth annual meeting of the American Catholic Philosophical Association will have taken place at the Hotel Netherland Plaza in Cincinnati, Ohio, on April 3 and 4, 1956. The general theme of the meeting was "The Role of Philosophy in the Catholic Liberal College." With the cooperation of the various contributors the secretary hopes to have the volume of *Proceedings* distributed to the members during the summer months. The 1957 meeting will be held on Easter Tuesday and Wednesday, April 23 and 24, at the Conrad Hilton Hotel, Chicago, Illinois. As in the past each member of the Association will receive an invitation to volunteer to contribute a paper on a suggested subject for the various afternoon sessions of the meeting. It is to be hoped a much wider response from the membership generally will be received by the various chairmen in charge.

Applications for Teaching Positions

The secretary reminds the members that he has on file a number of applications for teaching positions from well qualified teachers in the field of philosophy. Credentials indicate high standards of teaching with training in both this country and abroad. In several cases the applicants have also had considerable experience in teaching in the field. The Secretary is very desirous of bringing these applicants into touch with colleges or universities which may need their service.

Regional Meetings

The Spring meeting of the Illinois-Indiana Conference of the Association on March 24 was a panel discussion on the subject "Relation of Philosophy to Theology" with Rev. Gerard Smith, S. J., of Marquette University, Dr. Vincent Smith of the University of Notre Dame, and Rev. John T. Bonée, O. P., of the Dominican House of Studies, River Forest, Illinois, as panelists. Dr. Francis E. McMahon of Chicago is the Chairman of the Conference.

The Maryland-District of Columbia Conference of the Association had its first meeting of the academic year at Catholic University of America on January 13, 1956, with Rev. Dr. Walter Gouch, C. S. P., of Johns Hopkins University speaking on the subject "The Metaphysical Foundation of the Natural Law." The second meeting of the Conference was on March 7 at Trinity College, Washington, D. C., with Rev. Dr. Charles McCoy, head of the department of politics, Catholic University, speaking on the subject of "Ethics in the Curriculum of the Catholic College." The final meeting is planed for Ascension Thursday, May 10.

The North Central Regional Conference under the chairmanship of Dr. R. A. Kocourek of the College of St. Thomas, St. Paul, Minnesota, met on October 14 to discuss "The Place of History of Philosophy in the Catholic College Curriculum." Dr. Kocourek also spoke on "The Three Modern Fallacies About Communism." Rev. W. T. McGee of Immaculate Heart of Mary Seminary, Winona, Minnesota, was elected president.

The New York Regional Conference meeting at Mt. St. Vincent College on November 13, 1955, heard Dr. Richard G. Hinners of Manhattan College on the subject of "Heidegger's Conception of the Question: What is the Meaning of To Be in *Sein und Zeit*."

As Others See Us

The twenty-eighth volume of the *Proceedings* of our Association on the general theme *The Existence and Nature of God* was quite widely reviewed in philosophical journals. We should like to quote from one of these reviews, namely that of Dr. John Wild of Harvard University in the January 1956 issue of *Philosophical Review*:

> The reader who expects to find an outlay of essays narrowly restricted to scholastic subject matter and confined within the framework of a single point of view will be definitely surprised by the contents of this volume. The historical essays cover a wide range of topics running from the Eighth Book of Aristotle's *Physics* and St. Augustine's natural theology, to a penetrating Presidential Address on the treatment of God in modern philosophy. There are also a large variety of purely systematic studies, including one on the psychology of religion by Fr. Nash and an acute critique of *Invalid Proofs of God's Existence* by Vernon Bourke. We find a similar diversity of points of view ranging from the meta-philosophy of R. McKeon in his address on *Contemporary French Philosophy*, to the Franciscan and Platonic attitude of Fr. Wolter in his interesting exposition of Scotus' primary argument for the existence of God, and the Aristotelianism of Vincent Smith's defense of the philosophy of nature. Many of these essays are of high quality, and we shall select a few of them for more detailed comment.
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> James Collins, in his Presidential Address, clearly distinguishes the way in which modern philosophy, as opposed to classical and medieval thought, adopted a functional rather than a systematic approach to the problem of God. For Descartes, God was necessary to guarantee the reliability of memory and the existence of an external world. After beginning with the finite self, Descartes brought Him in to meet certain epistemological needs via the ontological argument.
>
> Spinoza questioned whether this Cartesian God, introduced *almost* at the beginning, could perform these far flung functions adequately. Hence he substituted God for the finite self as his methodological starting point. This meant, as Collins notes, that philosophy had to do the work traditionally allotted to theology. Instead of revelation, we have an immediate intuition into the Divine essence. When this failed to withstand serious criticism, Kant used the notion of God as a moral postulate to make the finite self free and immortal, and to harmonize nature with duty. Hegel finally exploited religion as a stage in his dialectical absolutism. It is no wonder that the collapse of these attempts has led many, like Heidegger and Merleau-Ponty, to advocate a complete exclusion of theological questions from philosophy. Mr. Collins concludes rather that philosophers should "refrain from making God a mere tool of their own special view of things" (p. 16).
>
> The whole idea of *proving* the existence of God is often attacked on the ground that it is either unnecessary for those who already believe, or

unconvincing for those who do not. Peter W. Nash considers this dilemma in the light of religious aspiration in the concrete, as exemplified in such figures as Augustine, Tolstoi, and Oscar Wilde. He concludes that the dilemma is based on a sharp separation of theory from practice which is not true to the facts of life. It is true that syllogistic demonstrations will be unconvincing to one who has had no practical experience of human futility and the meaninglessness of life without a final end. But human aspiration is directed toward a goal which must be understood in some way, with some degree of clarity. If this is clouded by confusion and error, the whole drive may be blocked. The first horn of the dilemma fails to recognize the many interim steps and stages of belief. It is here that theory may play a crucially important role "within a framework of appetitive drives" (p. 74).

Realistic thinkers have recently shown a strong tendency to abandon physical arguments in favor of metaphysical demonstrations based on the real distinction between essence and existence. Vincent Smith gives an interesting defense of the opposite position. He not only holds that the Aristotelian argument from motion is basically sound, but also that it is necessarily presupposed by any "real distinction of essence and existence" (p. 91). This last thesis, however, is subject to serious question, as the real distinction has been defended, without recourse to such argument, solely on the ground of existential plurality or the contingency of changing entities.

Fr. Wolter has written a clear and detailed exposition of Duns Scotus' demonstration as it is presented in the new critical edition of his *Commentary on the Sentences*. Two causes are *essentially ordered* if (a) they are contemporaneous; (b) the exercise of causality in the lower depends on the higher; and (c) the higher is more perfect. Scotus first argues that an infinite regress of such essentially ordered causes is impossible, on the ground that without a first, the whole series would be left uncaused. He maintains that a first uncaused cause is *possible*. In a crucial step, he then holds that only what exists virtually in its causes can be possible without being actual. Hence if that which has no cause is possible, it must be actual. *Ab oportere ad esse valet illatio* (p. 110). From this he deduces the infinity and unicity of this first cause. This careful statement will be of interest to students of medieval philosophy.

The most penetrating of the systematic papers is on "Invalid Proofs of God's Existence," by Vernon J. Bourke. Thus he puts his finger on the weak step in Scotus' complex argument,—the passage from an uncaused essence to actual existence (pp. 42-43). There is nothing illogical about such an argument. But logic alone tells us nothing of the existence or non-existence of such wonderful essences. "No addition of possibilities will give us an actuality" (p. 43). The Augustinian inference from timeless logical truth to a real eternal cause is subject to the same objection. Mr. Bourke shows that the Kantian type of moral argument which attempts to deduce a supreme rewarder and punisher from the awareness of binding obligation (cf. the paper on "The Moral Argument for God's Existence" by John P. Rock) is open to similar criticism. If obligation is interpreted

as a psychological experience, we are inferring extramental from mental being (p. 45). But the two are different. On the other hand if we interpret obligation as natural tendency, its "goal" becomes too polyvalent and equivocal to justify any such metaphysical inference.

Hume distorts the classical teleological argument by comparing the universe to a machine. "Teleological order is not simply the arrangement of a machine; in fact, the ordering of means to end often appears as mechanical disorder" (p. 47). Indeed no one of the three demonstrations criticized by Kant in his *Critique* corresponds to any classical causal argument, and each is not only subject to the objections raised by Kant but to others as well. Thus the watchmaker argument leads only to an anthropomorphic agency, not to a transcendent Deity.

The critical studies by McTighe and Kendzierski on "The Finite God in Modern Thought" also deserve to be mentioned for their accuracy and penetrating criticism. This volume is not only a mine of historical information but of systematic argument as well. It deserves the careful attention of serious students of philosophy, whatever their point of view may be.

Philosophical Institutes

A colloquium on "Thomism and Contemporary Philosophy" is being sponsored by the Department of Philosophy at St. Louis University for June 12-15, 1956. The chairman of the colloquium is Professor James Collins. On June 12, Professor Sidney Hook, New York University, and Rev. R. J. Henle, S. J., of St. Louis University, will discuss the subject "What is the Relevance of Scientific Methods for Philosophy?". On June 13 Professors Leonard J. Eslick of St. Louis University and Lewis E. Hahn of Washington University will lead the discussion on the subject "What is the Starting Point of Metaphysics?". On June 14 the subject will be "What is the Nature of Human Freedom?". The speakers will be Professor Donald E. Hodges, of the University of Missouri, and Rev. George P. Klubertanz, S. J., of St. Louis University. On June 15 the subject will be "What is the Relation Between Fact and Ethical Theory?" with Professor Vernon J. Bourke, of St. Louis University, and Professor Eliseo Vivos, of Northwestern University, as the speakers. Admission will be by application only and is limited to teachers and graduate students. Tuition fee is $20.00. All sessions will be held on the campus of St. Louis University where also living quarters and meals may be obtained. Applications for admission should be sent to Rev. W. L. Wade, S. J., of St. Louis University.

Sister M. Cleophas, R. S. M., President of Mt. St. Agnes College, Mt. Washington, Baltimore, Maryland, announces the second Institute

of Philosophy under the direction of Rev. Gustave Weigel, S. J., to be held at Mt. St. Agnes College, Baltimore, Maryland, during the week of June 25. The theme of this year's Institute will be "Religion and Philosophy." The five day session will consist of ten talks and discussion periods on the following subjects: "The Religion of Philosophy"—Rev Gustave Weigel, S. J.; "Religion and Psychiatry"—Dr. Gregory Zilboorg; "Religion and American Sociology"—Will Herberg; "Religion and the Natural Law"—Dr. Heinrich Rommen; "Religion of Reason and Faith in Thomistic Thought"—speaker to be announced. The Institute is open to a limited number of registrants. Further information may be obtained by writing to the Registrar of the College.

Miscellaneous Items

The Aquinas Lecture of Marquette University for 1956 was given by Rev. Dr. Gerard Smith, S. J., head of the Department of Philosophy at Marquette University, as part of the University's celebration of its seventy-fifth anniversary of the University on March 18 on the subject: *The Truth that Frees.*

The Committee to Advance Original Work in Philosophy of the Western Division of the American Philosophical Association announces that its program to express the needs and possibilities in political and social philosophy have been extended by the Rockefeller Foundation through 1956. Projects to begin in 1957 will be accepted until June 1, 1956. Statement of projects in these fields are cited from philosophers resident within the territory of any of the three divisions of the American Philosophical Association. Only post doctoral studies expected to issue in a book will be considered at this time and any eventual fellowships will be limited in number. Projects for both individual and for collaborative work will be considered. Statements of the project should be accompanied by relevant information about the educational and academic background of those submitting them. A bibliography should be included. Statements should be addressed to Professor Paul Henle, Department of Philosophy, University of Michigan, Ann Arbor, Michigan, who is chairman of the Committee.

The *Proceedings* of the American Philosophical Association, both the Eastern and Western Divisions, including the Presidential Addresses of both divisions, for the 1954 and 1955 sessions, are available at the Antioch Press, Yellow Springs, Ohio. The price is $1.50.

A review called *Augustinus*, devoted to the thought of St. Augustine, especially in its contemporary relevance, has begun publication in Madrid, under the editorship of Victorino Capanaga and Adolfo Munoz-Alonso. The American agent for subscriptions is the Rev. Frank de la Vega, O. R. S. A., Thirty-fourth and Parallel Avenue, Kansas City, 2 Kansas.

CHARLES A. HART,
National Secretary

Catholic University of America,
Washington, D. C.

REVIEW ARTICLE:

St. Ignatius on Education

by John A. Oesterle

ON JULY 31, 1556, there died a man who left a deep and lasting impression on the life and growth of the Catholic Church. His name was Ignatius Loyola, founder of the Society of Jesus. . . ."

These words appear on the front of the little pamphlet put out by the Jesuits to commemorate the Ignatian Year. The Ignatian Year, observing the 400th anniversary of the death of St. Ignatius, was instituted by the Superior General of the Society of Jesus, beginning July 31, 1935, and extending to July 31, 1956. Among the many achievements of the Jesuits, their work in education is perhaps best known. In the New World, they established a college in Mexico City in 1573, over half a century before the founding of Harvard. In the United States at the present time, apart from their many high schools, the Jesuits are conducting twenty-eight colleges and universities, with an enrollment of nearly a hundred thousand students, close to half the total enrollment of all Catholic Schools.

It is not only fitting but just that THE NEW SCHOLASTICISM, the official journal of the American Catholic Philosophical Association, should join in the acknowledgment of the Ignatian Year. The contribution of Jesuit universities and colleges to the promotion of philosophical study and research is amply indicated in the issues of this magazine and in the meetings of the Association from the very beginnings of both. There is no need to dwell on the indebtedness owed to the many outstanding priests and lay teachers in the Jesuit institutions of this country. The Jesuits have been particularly active in the encouragement of laymen in the study and teaching of philosophy. It is perhaps not inappropriate to mention my indebtedness to a Jesuit institution and in particular to Fr. R. J. Bellepercbe, S. J., for being introduced to philosophy and encouraged to go on to graduate work in it. Such results are certainly in the spirit of St. Ignatius, for "he seems to have been the first founder of a religious order to make the education of lay youths in both secular and sacred subjects one of the major works prescribed by the constitutions of his order."

The concluding part of the previous sentence is quoted from *Saint*

Ignatius' Idea of a University.[1] Although apparently not conceived as a project in connection with the Ignatian Year (the Author's Preface is dated July 31, 1954), the book serves admirably as an occasion to make better known the contribution of St. Ignatius himself to Catholic education during the observance of the Ignatian Year. It is my impression, upon reading the book, that the extent of St. Ignatius' contribution to education is not sufficiently known and appreciated or, better perhaps, not precisely evaluated and estimated. Fr. Ganss himself acknowledges in the Preface, in the light of reading St. Ignatius' own writings, that he has had to abandon educational theses he thought were part and parcel of Jesuit educational theory—theses which stemmed, not from St. Ignatius, but often no further back than the time of John Locke. If someone so close to the Jesuit tradition as Fr. Ganss makes this discovery, presumably all of us will gain immeasurably from an examination of Jesuit educational theory as it is found primarily in St. Ignatius himself.

My object in presenting a necessarily brief discussion of the book will be twofold. I shall seek to summarize, through Fr. Ganss, the thought of St. Ignatius on education and to note the development of Jesuit educational institutions during the lifetime of St. Ignatius; this early development of Jesuit education is, I think, not generally known. Secondly, I shall seek to reproduce and comment on that part of St. Ignatius' plan of education which pertains to theology and philosophy, and to add a note or two concerning philosophy of education in general.

The heart of St. Ignatius' thought about education can be reduced to two main points. Fr. Ganss summarizes them in the following way (p. 18). St. Ignatius "accepted education, especially that of lay students, among the ministries of the Society of Jesus as a means of promoting the salvation and perfection of the students, in the hope that they might vigorously and intelligently leaven their social environment with the doctrine and spirit of the Kingdom of Christ. . . ." Secondly, "since solid and strong intellectual formation was necessary to achieve this, he appropriated the best elements he could find in the educational system of his day, Catholicized them, and organized them into an instrument truly fit to achieve his purposes in his era—that is, the period of the advanced Renaissance as distinguished from late scholasticism." It seems to have been especially the merit of St. Ignatius, in outlining his

[1] By George E. Ganss. (Milwaukee: Marquette University Press, 1954), p. 107.

educational aims, to preserve the best in the education of the past while being fully alert to the interest and needs of his day.

Before examining how St. Ignatius planned the accomplishment of his educational ideals, let us sketch the rapid growth of educational institutions under the Jesuits, much of it while St. Ignatius was still living. This widespread early development is, as I have suggested, not generally known.

St. Ignatius personally approved the opening of *thirty-nine* colleges or universities, all within the last ten years of his life. All but six were in operation before his death. By colleges, St. Ignatius meant dwellings for young Jesuits and others whose chief occupation was study. Fr. Ganss lists the following types of colleges existent in the Society by the time of St. Ignatius' death: 1) those in which only young Jesuit students lived and attended lectures at public universities (Paris and Bologna); 2) those in which Jesuit professors taught young Jesuits (Gandia); 3) those in which Jesuit professors taught both young Jesuits and extern students (later at Gandia); 4) those intended chiefly for extern students, but with some young Jesuit students (Messina); 5) those which were boarding colleges for aspirants to the priesthood who went elsewhere for most of their classes (the German College in Rome).

By a university, St. Ignatius meant a college in which the lower faculty of languages and letters was augmented by the higher faculties of philosophy and theology. The Roman College is a concrete example of what St. Ignatius had in mind as a university. It was opened in 1551 with a staff of fourteen Jesuits, who taught letters. (It might be noted that this lower faculty of letters is what we would now consider as secondary education). Two years later, the faculties of philosophy and theology were added, and thus it became a university in the sense of having all the elements present which St. Ignatius considered necessary for a university. (It became known as the Gregorian University in 1584 when Pope Gregory XIII gave the Jesuits a new building). It was with this institution especially in mind that St. Ignatius wrote and revised his *Constitutions* on education; he lived near it and it afforded him firsthand experience. Other Jesuit colleges which were also universities (in fact if not in name) during the lifetime of St. Ignatius were those of Gandia, Messina, Coimbra, Vienna, Prague, and Billom.

The plan of St. Ignatius for his colleges and universities is given in Part IV of *The Constitutions of the Society of Jesus*, which Fr. Ganss translates from the Spanish text of St. Ignatius. It appears as

the last part of the book, pages 271-335. He comments on it at various places in the book, e. g., in Chapter 5, "Observations About the Organization," Chapter 8, "Ignatius' Appropriations and Adaptations," and particularly in Part III, "The Spirit of Ignatius' Constitutions on Education," Chapters 9 and 10.

In the latter section, Fr. Ganss discusses the relation of this fourth part of the *Constitution* to the *Ratio Studiorum* of 1599, which is the following: the *Constitutions* gives the sources and basic principles, while the *Ratio Studiorum* is in the nature of a bulletin or catalog, presupposing and applying the former document to a given situation of time and circumstance. Since the *Ratio Studiorum* has received much more consideration in treatises on education, Fr. Ganss is justifiably concerned to warn against reading the *Ratio Studiorum* without the spirit of the *Constitutions*, "for the identical group of Catholic educational principles which make up the spirit of Ignatius in Part IV of the *Constitutions* is also the spirit of the *Ratio Studiorum*. This is the important fact which has been overlooked by those who see in the *Ratio Studiorum* . . . only a collection of administrative decrees or of practical procedures. This oversight leads them to grasp the letter but miss the spirit" (p. 206). It is well to bear in mind, then, that the *theory* of Jesuit education is not in the *Ratio Studiorum* of 1599 or in any other later official pronouncements; they are either interpretations, applications, or adaptations of Ignatius' principles to various times and occasions. The primary merit of Fr. Ganss' book is that it appears to be the only one which has as its principal theme the educational theory of St. Ignatius himself.

My concern is to present only those aspects of St. Ignatius' theory of education that are of special interest to philosophers and theologians. St. Ignatius is, first of all, clear and forceful on the point that theology is the most important subject in the curriculum. In Chapter 12, n. 1, of Part IV of the *Constitutions*, he says:

> Since the end of the Society and of its studies is to aid our fellow men to the knowledge and have love of God and to the salvation of their souls; and since the branch of theology is the means most suitable to this end, in the universities of the Society the principal emphasis ought to be put upon it. Diligent treatment by highly capable professors should be given to what pertains to scholastic doctrine and Sacred Scripture, and to that part of positive theology which is conducive to the aforementioned end.

As Fr. Ganss says, in commenting on this passage (p. 54):

> Ignatius was well aware how incongruous it would be for a student to

develop his knowledge of literature or physics or mathematics or law or medicine to the well-reasoned knowledge which is characteristic of one who has the degree of a bachelor, master, or doctor in the subject, and simultaneously to let his knowledge of theology . . . remain that characteristic of a child. . . .

In Chapter 14, n. 1, St. Ignatius further says: "In theology there should be lectures on the Old and New Testament, and on the scholastic doctrine of St. Thomas. . . ." "What he prescribed," Fr. Ganss remarks, "is a sequence of theology courses lasting throughout four years, with St. Thomas Aquinas' *Summa Theologiae* as the chief textbook" (p. 54).

The concern of St. Ignatius for an orderly and organic presentation of theology, following St. Thomas, undoubtedly sprang from his fruitful association and study with the Dominican Fathers of the Convent in Rue Saint-Jacques in Paris in 1534. St. Ignatius wished his students to know thoroughly all the great topics in theology, such as God, the Trinity, the Incarnation, and to grasp the relation of each topic to all others. He stresses this not just for young men intending to be priests, but for lay students as well, since for centuries lay students had been attending university lectures on theology. Fr. Ganss notes that "the instruction in theology was to be open to externs as well as to Jesuits," (p. 55), and refers to Chapter 7 of Part IV of the *Constitutions*, which explicitly refers to externs.

From St. Ignatius' period of study in Rome, particularly his pursuit of the master's degree at the University of Paris, he acquired knowledge of and much esteem for Aristotle. In this connection, Fr. Ganss writes, "this was to lead him, as we shall see, to inaugurate later in Rome itself a measure of great importance in the eventual restoration of a sound philosophy—that of making Aristotelian philosophy the main constituent of the entire program of arts in the universities he was to found" (p. 15). To appreciate the significance of this contribution of St. Ignatius, it must be borne in mind that, by and large, philosophy in the sixteenth century was not in nearly so flowering a condition as it had been in the thirteenth century, chiefly owing to the decline and misrepresentation of Aristotle, current at the time. In Chapter 14, n. 3 of Part IV of the *Constitutions*, St. Ignatius states: "In logic, natural philosophy, moral philosophy, and metaphysics, the doctrine of Aristotle should be followed."

The insistence of St. Ignatius on the primacy of theology, of the necessity of following the systematic and orderly presentation indi-

cated by St. Thomas in the *Summa Theologiae*, and of the similar need of orderly development in philosophy through the instrumentality of Aristotle is as relevant at the present time as it was for the sixteenth century. It is not a question here of *names* primarily, that is, "thomistic" and "aristotelian," but rather of the orderly development of doctrine, particularly in fundamental courses, through the unparalleled medium of St. Thomas and Aristotle, whose importance is in proportion to their value as instruments for teaching truth.

Here we may legitimately wonder to what extent the contemporary Jesuit university and equally the contemporary non-Jesuit Catholic university follows the mature counsel and prescription of St. Ignatius, and others, with respect to the teaching of basic courses in philosophy. There is a current tendency to depart from the order of learning manifested (and in no sense "made up") by Aristotle, of proceeding from what is more known to us to what is less known, and of proceeding from logic through natural philosophy to moral philosophy and metaphysics, an order sanctioned by St. Thomas as well. There is also a curious tendency in vogue to "inflate" St. Thomas at the corresponding expense of Aristotle, which is not the same thing as to point out differences between the two. It is reasonable to assume that St. Thomas would have found such a tendency startling. St. Ignatius, who is probably not to be regarded as a philosopher or a theologian in the professional sense of the terms, nevertheless grasped the underlying union of doctrine in the Philosopher and the Theologian at a particularly difficult time, the sixteenth century.

The primacy of theology in the curriculum is not a feature peculiar to St. Ignatius, but the intent and seriousness with which he expected it to be carried out is certainly noteworthy. His language indicated that he expected theology to be taught as a science and a wisdom. Here again, to some extent at least, the contemporary Catholic college—Jesuit and non-Jesuit—appears to be paying lip service to the principle rather than giving it mature assent.

By and large, Catholic institutions in this country are weakest in theology departments; the weakness is chiefly in the content, to use a maligned word. By and large, Catholic institutions spend less money, care, and preparation on the theological education of their students than on any other part of education. There is a persistent tendency to regard theology as a subject which anyone can teach in virtue of being ordained, and hence relatively little concern is given to the professional preparation of teachers in theology. Such an approach to the most

important branch of the college curriculum is quite alien to the mind of St. Ignatius who, in Chapter 12 of Part IV of the *Constitutions*, stresses "diligent treatment by highly capable professors," the assumption clearly being that the teachers are thoroughly formed in the subject they are to teach.

A statement from Fr. Ganss has already been quoted to show how much St. Ignatius was aware of the incongruity that would exist if a student should develop his knowledge of literature or physics or law while at the same time not be able to reason deeply about the fundamental matters of theology. No doubt, some difficulty may arise today because of the general quality of education students have prior to entering college, yet Fr. Ganss has the following to say in this connection:

"In Ignatius' day, the opportunity of teaching scientific theology to lay students probably was not as great as that which is opening up before the American Jesuits today. The era of widespread literacy had not yet begun, and the number of lay students desiring training in theology was no doubt far less than that of the young Americans requesting it in Jesuit and other Catholic American universities today" (p. 56). All the evidence suggests that St. Ignatius would have been quick to respond to the need and desire of young Americans for a "scientific training in theology as a means to equip themselves with a scientifically reasoned Christian outlook by which they could take an effective part in life . . ." as Fr. Ganss suggests (pp. 56-57).

In an appendix to the book, Fr. Ganss discusses "*Paideia*, Liberal Education, and General Education." He is prompted to do so presumably on two scores, the contemporary interest in genuinely liberal education, and the concern of St. Ignatius himself for a complete code of liberal education. In the appendix, Fr. Ganss discusses the meaning of the above three terms, particularly as they are used by current writers, Catholic and non-Catholic. It seems to me inaccurate to equate "general education" and "liberal education," as Fr. Ganss and most contemporary writers tend to do. No doubt, general education in the best sense of the term (the cultivation of the intellectual virtues with the stress on speculative knowledge) is the heart of liberal education. There are, however, other parts to liberal education: the liberal arts, as the means of acquiring liberal knowledge, and the specialized education following upon general education, for example, concentration in different areas of liberal knowledge. Liberal education would thus seem opposed primarily to vocational or professional training. Viewed

in this way, it is evident that all college students should have a minimum of liberal education even, and perhaps especially, if they are going on into this or that form of professional education.

In any case, it is abundantly clear that St. Ignatius' educational scheme is basically a plan for liberal education. He required, first, a formation in what we would call the liberal arts but which, in the late Renaissance period of the sixteenth century, was disguised a bit under the confusing name of "humanities," and tended to emphasize unduly rhetoric and the niceties of polished expression. Secondly, he insisted upon knowledge of the most fundamental liberal sciences, philosophy, mathematics, and the natural sciences. Finally, and most importantly, he required the student "to know scientific theology, the true keystone of a Catholic liberal education . . . Theology is the true crown of the liberal education which his *Constitutions* provide . . ." (p. 192).

The foregoing summarizes the heart of an educational plan that is truly liberal and truly Catholic—a Christian *Paideia*. The fundamental principles underlying it are as relevant to Catholic education now as they were in the time of St. Ignatius. "If Ignatius were living in the United States today . . . he would without doubt carefully observe the objectives and procedures of those who are striving to adapt the *paideia* or liberal education of Western Culture to modern circumstances. . . . He would want to have a Christian *paideia* fully abreast of the times, in which Christian Culture would be an object of study, and in which philosophy and theology would in practice be the most important branches in forming the outlook on life" (p. 270).

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Book Reviews

The Material Logic of John of St. Thomas. **Basic Treatises. Translated by Yves R. Simon, John J. Glanville, and G. Donald Hollenhorst. Preface by Jacques Maritain. University of Chicago Press, 1955. Pp. xxxiv + 638. $10.00.**

The importance of John of St. Thomas (1589-1644) in modern Thomistic thought can hardly be exaggerated. The dominant tradition of Thomism comes from him, and through him from Cajetan. And the part of philosophy in which his influence has been greatest is logic. In his *Cursus Philosophicus Thomisticus* the first of the three large royal octavo volumes, the *Ars Logica*, fills 840 double-column, closely packed pages. The first part, on formal logic, takes up 247 pages; and the remaining 600 pages are occupied by the second part, on material logic, in which he has exercised the greatest influence.

Material logic is concerned not only with the form of reasoning but also with its content. Its main concern is demonstration, which seeks true and certain and necessary conclusions and requires, besides consistency in reasoning, premises that are true, certain, and necessary. Here too are treated questions about the nature of logic and of its elements.

The present translation, the first ever offered in English, for practical reasons does not attempt to present the whole of the "material logic." To do so would have increased the size of this already fat volume by nearly two-thirds. About 355 pages out of the 600 of the Latin text have been included. For the most part whole "questions" have been taken, though sometimes only one or more "articles" within a question are selected; but no part smaller than an article is ever excerpted.

Included in the translation are, the whole question on the nature and domain of logic, most of the question on the logical "beings of reason" (three out of five articles), the question on universals considered in themselves, that on the antepredicaments and the analogies, five questions (almost the entire treatise) on the categories, the first article of the question on the sign, the whole question on cognitions and concepts, and the whole treatise (four questions) on demonstration and science. Omitted are questions on the causes and predication of

universals, the whole treatise (seven questions) on the predicables, one question on the last six categories and another on the postpredicaments, and some of the matter on signs, including the whole question on their classification.

Not much fault could be found with the selection of material made by the translators. Certainly the parts on the nature of logic and on demonstration and science had to be included. The explanation of universals (much different from the modern notion of classes) is basic to John's conception of logic, and the section on signs and concepts contains some of his most characteristic and influential contributions. Some question might be raised about the section on the categories, since the matter treated there pertains more to metaphysics and the philosophy of nature than to logic. But some of these notions explain the foundations of different parts of logic, as the relations of substance and accidents help to explain the logic of predication. Above all, a correct understanding of relations is of prime importance for grasping the nature of logical entities. It is a matter for regret, no doubt shared by the translators, that no part of the matter on predicables could be included.

The translation is well done, and the English is almost always quite easily readable. Some commendable liberty has been taken with sentence structure to gain simplicity and directness, and with phrases to gain more idiomatic expression. As is inevitable in the innumerable practical judgments involved in translating, many decisions have been made which will not be comprended by all readers. *Ens rationis*, for instance, has been translated as "being of reason," and similarly *distinctio rationis* as "distinction of reason" and *relatio rationis* as "relation of reason." Apart from the strangeness of the English, the ambiguity into which these translations easily fall (so as to be taken to mean "the existence, the distinction, the relation which reason has") should have prompted a little less slavish adherence to the Latin. One Latin word—the only one, fortunately—has been adopted in the English translation: *habitus*. Even though its meaning is somewhat different from that of "habit" as most commonly used in English, this word might easily have been adopted (as it has in the English Dominican and the Pegis translations of the *Summa* of Aquinas) with perhaps an explanatory note. The meaning of *voces* in a context about the expression of thought is better rendered by "words" than by "sounds." And when *adinvenit* is translated "discovers" (p. 21), the statement quoted from St. Thomas

(*In IX Metaph.*, 3, n. 574) *intentiones* [*logicas*] *ratio adinvenit in rebus cognitis*, is made contradictory to what immediately follows, for it is said that these intentions "are not found in the real world." Nor are they discovered ready-made in things as known, but they have to be formed or "contrived" by a further operation of reason. The expressions unsatisfactorily translated, however, are few and detract but slightly from the genuine merit of the translation.

Besides the translated text, this book contains a brief preface by Jacques Maritain in praise of John of St. Thomas; a foreword by Yves Simon treating especially of the importance and legitimacy of material logic; about forty pages of notes—some few from John of St. Thomas himself, some references (though most references are inserted in the body of the text), many doctrinal explanations by the translators, and finally an index of names and an index of subjects.

The typography is clear and neat though it appears to have been done by an offset process and right-hand margins have not been justified.

The work here presented in English translation can be considered from two viewpoints: as an interpretation of the doctrine of St. Thomas Aquinas, and as a philosophical work in itself. In spite of the high encomiums that have been heaped upon John of St. Thomas as a commentator, and despite his claim to write "according to the mind of St. Thomas," a number of points contained here have been criticized in recent years as not presenting Thomas' true meaning: his doctrine on objective concepts, on transcendental relations, on predicamental relations based upon measure, on formal abstraction in all sciences, on the three degrees of abstraction, and on the habit of science as a simple quality. Though for the most part John's doctrine undoubtedly is that of Thomas, it cannot be accepted universally and uncritically as Thomas' genuine doctrine. This does not, however, prevent his work from having great merit in itself or from having exercised a great influence historically.

Thanks are due the translators and the publisher for having presented so important a work in so acceptable a garb.

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***Neurotic Anxiety*. By Charleen Schwartz. New York: Sheed and Ward, 1954. Pp. 120. $2.75.**

Mrs. Schwartz, in this all-too-brief little book, has done a great work of ordering. She has neatly applied the wisdoms of philosophy and theology toward the correct ordering of the lesser but important science of psychoanalysis; and in particular has taken a first long step toward making the work of Sigmund Freud understandable and usable by Catholic analysts. The book might be seriously misunderstood, however, if it were dismissed as a mere "baptism of Freud by St. Thomas." Its greatest importance and value lie not in how it agrees with Freud (although in its place this is seen as important too), but in how it disagrees, corrects, redirects, and orders his philosophical interpretation of observed and observable fact.

On the psychiatric level, which should concern itself only with facts, Mrs. Schwartz agrees with Freud wholeheartedly; and convincingly makes the reader face the historical fact that, "Freud is still unsurpassed both in his clinical observations and in his insights concerning the various neurotic mechanisms." On the philosophical and theological level, the author sits down next to Freud, as it were, and says to him in effect: "As long as you are merely observing you are most able and competent; but whenever you interpret and draw conclusions, you do not know the nature of man well enough to accomplish it. Here is the right answer according to St. Thomas." On the same level, to her readers she seems to say: "Freud has done a prodigious service for mankind in marshaling a remarkable body of psychological observations whose accuracy and validity can scarcely be doubted. Let Catholic philosophers and theologians not ignore it; and let Catholic psychiatrists, priests, and others who put philosophy and theology into action take full advantage of it." It is an arresting message which, if heeded, might bring no inconsiderable amount of good to the present-day world, so in need of a right and healthy conscience; and might effect no small amount of natural and supernatural ordering in the individual troubled soul.

Regarding content, Mrs. Schwartz first makes a basic correlation of terms and ideas between Freud and St. Thomas, showing that Freud's observations support the classic Thomistic view of man's psyche, and identifying, for example, Freud's "super-ego" with the practical intellect and conscience. The author is careful and exact in relating Freudian and Thomistic terms, always insisting and reminding that

Freud's terms are ambivalent: they at once coincide and do not coincide with their scholastic counterparts.

With terminology somewhat too briefly set, the author proceeds to define neurosis ("the inability to resolve conflict between rational and animal libido" either by sinning or by following a right conscience), and neurotic symptom. Rejecting the Freudian position that the symptom always represents the *libidinal* element in neurosis, she maintains and shows from Freud's own cases and observations that the *punitive* element in neurosis is universally represented by the symptom, and that the rational libido (or conscience) generates that symptom. With these ideas in view, there follows some remarkable re-interpretation of Freudian psychoanalysis.

The chapter on "Neurotic Anxiety and Guilt" is certainly the book's best. It is a "rationalization" of Freud in the most beautiful sense of that badly misused word. It might well be required reading for any who are dealing professionally with souls, sacramentally or otherwise. It will certainly help anyone to distinguish between normal and neurotic anxiety: the first of which, plus a sense of guilt, may lead to virtue; the second of which plus guilt is a sickness and can never possibly produce virtue. The chapter will also help toward an understanding of the mechanisms of scruples, though by no means their cure. But most of all, it should help priests and others who are not psychiatrists (analytic or otherwise) to recognize and distinguish between those relatively normal souls whom they can help directly with God's grace, and those who, still needing grace to really cure them, ought to be sent first to a trained psychiatrist.

Mrs. Schwartz gives Freud great credit for recognizing the sense of guilt in every neurosis, even though he could not explain, understand, nor account for it because he never looked to the rational but always to the instinctive drive in man. "It seems ironic that Freud, who would laugh at the idea of original sin, recognized its effects more clearly than some of those who would accept it on faith." Conversely, she takes to task and shows the folly of those contemporary psychologists who, professing to be followers of Freud, "ignore the basic significance of guilt in neurosis . . . and are led to assume that man can somehow suppress undesirable tendencies and become normal by his own powers . . . thus it seems to us that with the right corrections Freud, for all his attack on religion, becomes more Catholic than the others who assume that man is capable of bringing about the normal psychological adjustment all by himself."

On the title page of her book, the author has quoted the words attributed to St. Thomas: "If something is well said, do not be concerned with who said it, but be sure to remember it." Perhaps some Catholic psychologists and others have been too preoccupied with rejecting Freud not because of what he said but because it was Freud who said it. *Neurotic Anxiety* points up the fact that it would seem a lot safer and saner to follow Freud in his clinical observations while correcting his interpretation, than to follow a false interpretation (e.g. Jung's) simply because it seems to have been said more nicely or even more "religiously." In any case, it is our understanding that there is more where this came from, and that *Neurotic Anxiety* is only an interesting sampling of the great work of synthesis that might be done, and is being done by degrees, in relating theology and metaphysics to the field of psychiatry. If this be true, it is to be eagerly hoped that Mrs. Schwartz will soon give us another book as valuable as this one.

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The Metalogicon of John of Salisbury. **Translated with an Introduction and Notes by Daniel D. McGarry. Berkeley: University of California Press, 1955. Pp. xxvii + 305, with bibliography and index. $5.00.**

It is good to have in English the chief work on education and the liberal arts of John of Salisbury, certainly in many ways one of the leading exponents of humanism in the Middle Ages. He deserves a place in any history of culture as one of the few approximations to a pure doctrinal position, in his case that of a Christian Ciceronianism. For this reason as well as for his Latin style, often described as the purest of any in the Middle Ages, John has always been dear to those who extol a predominantly literary over a philosophical or scientific culture. His writing reveals the charm of his personality, which must have contributed to his being selected for many important diplomatic and ecclesiastical missions. Mr. McGarry has made it possible for a wider audience to experience his charm and to know at first hand one of the classics of education, which has much to contribute to the cur-

rent re-evaluation of educational aims and methods, and particularly of the liberal arts.

John, however, is quite unCiceronian in his interest in logic. He is the earliest in the 12th century known to possess the whole of the Aristotelian *Organon*, and the *Metalogicon* is largely a defence of the utility of its treatises. Yet he also knows the logic of his own day and several times makes a point of defending the "moderns." The title of his work is, I would guess, the first use of the term "metalogic," and at least in spirit it reflects some of the current sense of the term. It is a "metalogic" in its logicizing about logic, although John takes "logic" broadly to include all the linguistic arts, and he is even more concerned to promote interest in logic than to attempt any formal analysis on his own. In form his book is an answer to the belittlers of logic and the liberal arts. John shows a particular interest in dialectic, even to the extent of preferring the *Sophistical Refutations* to the *Analytics*, and in this as well as in his love of linguistic analysis he shows something of the temper of mind that led to the great age of scholastic disputation.

The *Metalogicon* contains material of interest to the history of logic. The passion for logic which becomes a leading characteristic of the great scholastics is clearly under way. Distinctions and theories which later become standard are present, although often in an undeveloped form. John shows acquaintance with the theory of impositions and intentions (pp. 39, 147), supposition (p. 175), *appellatio* (p. 48), *aequipollentia* (pp. 43), *consignificatio* (pp. 151, 153), *modi significandi* (pp. 209, 262). He reports that William of Soissons, to whom he taught the rudiments of logic, invented a machine for producing *consequentias* (p. 98), and he remarks on the unsatisfactory state of the theory of the conditional proposition (pp. 235-36). I have given the page references, since the index fails to give most of them. In general, the translation is weak on logical terms; and sometimes quite misleading: for example, "imposition" is confused with "intention" (p. 147, n. 43), and "denominative" predication with "univocal" (p. 151). Since the Latin of these logical terms is usually provided in the footnotes, the translation to some extent carries its own remedies for these failings. Yet it would have been more useful for the history of logic if the index had contained all the technical terms that John uses from grammar and logic.

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The Dignity of the Human Person. **By Edward P. Cronan. New York: Philosophical Library, 1955. Pp. xvi + 207. $3.00.**

"Today's crisis is not of oil; it is human and personal" (p. xiv), for it is the result of forgetting that judgments governing human affairs should be measured by the natural dignity of the human person as an image of God. Such is the thesis of Edward P. Cronan in this volume.

After insisting in his opening analysis that the specifying characteristic of person is rational nature, Father Cronan turns to the exposition of the concept of dignity. "Dignity," he says in summary later in the book, "is goodness, which is perfection, which is completeness in existential being, which is God" (p. 122). The dignity of participated being, then, will be its likeness to absolute being.

Man's superiority to the rest of material creation, consequently, has no other foundation than his imaging forth the divine. "If man's value is not . . . a derivative and participative thing, he loses all value, because obviously he is nothing absolute and permanent in and from himself" (p. 100). This participation expresses itself in all his intellectual and volitional operations, but especially in his knowledge and love of God. Of intellect and will Father Cronan affirms, "It is philosophically clear that they are directed, naturally and inescapably, to truth and goodness, the absolutes, and that in the *direct* striving for this, which we name God, we find the root reason for man's being an image of God" (p. 112).

But man is not only person—he is also personality—and therefore in a final chapter Father Cronan presents a study of the perfections acquired in human society. Among these he lists and discusses in some detail civil liberty, social rights, law, the exercise of personal authority, education, property ownership, work, and workship.

With the importance of the theses here developed it would be hard to argue. But it is almost equally difficult to identify the audience to which they are directed. Their heavy documentation as well as the scholastic vocabulary they frequently presume rules out the general reader, while they are too commonly accepted within the school to justify so lengthy and exposition. On the other hand, the author's expressed determination to regard the immateriality of man's thought and volition as a datum which he need not defend (p. 49, n. 36) would seem to make his work unacceptable to those whom its practical message might chiefly benefit.

The text as a whole would profit by attention from a copy reader.

Such sentences as the following (p. 180) do not owe their entire difficulty to their subject matter:

> The concern he [man] may have for knowledge of material things and the mysteries of nature, the trouble he may take to protect the efficiency of the process by conducive surroundings and by the protection of the body-instrument through which his human faculties work, however rational that evaluation may be, must, if he is to evaluate truths and abilities according to their permanent and objective value in the order of being and in the created planning of God, never receive more value in his eyes, nor therefore more energy and time for him, than the spiritual values which are themselves closer to divine reality, and whose acquiring in imitation develops him into a closer image of the supreme value his initial nature has made him the dynamic image of.

Of several inquiries which might be put to the author, space allows but one: In what sense, short of faith, can man be said to go beyond that highest indirect knowledge in which he sees God as man's own cause and "focus the rational faculties directly upon God" (p. 115)? What is this knowledge which is not yet supernatural but is still superior to any knowledge through creatures?

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Ethics. **By Radoslav A. Tsanoff. Revised Edition. New York: Harper, 1955. Pp. xv + 430. $4.00.**

Possibly the publishers of this volume are correct in their assertion that a large number of college and university teachers "will welcome this new edition of a work which has been acclaimed in the highest terms and used as a text in close to two hundred colleges and universities." Unfortunately, there are also hundreds of both professors and students of ethics who will be sorely disappointed with Dr. Tsanoff's attempt to outline a realistic theory of human conduct suited to the dignity of man. A glance at the publisher's list of institutions, "which have used the first edition of *Ethics*," will show that professors of ethics in Catholic institutions have manifested a marked disinterest in Dr. Tsanoff's widely heralded text. A reading of the revised text will show why.

The author of *Ethics* is desirous of presenting "a plain account

and criticism of the moral life." He thinks that his objective can be best attained by viewing his manual as "meant to raise problems" and to provide "discussion opportunities." Dr. Tsanoff looks upon ethics as "the integral normative science, or the science of systematic valuation." If one asks, "Are values real parts and aspects of nature, or are they only our personal reactions to things?" our author answers, "There is confusion in this way of asking the question." Ethical values are real, they are to be recognized as "aspects of ultimate reality"; and, even "if values were creations of our own, still they would be in and of nature, for nature includes us and them."

The history of ethical systems, continues Dr. Tsanoff, testifies to the wide variety of answers given to man's investigation of the Supreme Good and the nature of moral sanctions. Good "secular moralist" that he is, Dr. Tsanoff insists that he is in search of "an ethical answer to an ethical question," and he finds no satisfactory answers to the above questions in a theological ethics, also known as "decalogue morality." He warns his readers that his rejection of any and all forms of theological ethics does not imply his rejection of any and all types of religion from the domain of ethics. "Religion," so we are informed by the author, "preserves and perpetuates the moral gains of society by investing them with the halo of sanctity. They become holy and inviolable truths."

The private ethical options of Dr. Tsanoff are his own concern. But when he attempts to write off any and all forms of theological ethics on the score that some of the professed theists—he mentions Scotus—view "God's will" as "itself the ultimate moral determinant" of human conduct, Dr. Tsanoff, we aver, is less than just. One finds it difficult, if not impossible, to allay the suspicion that the good doctor's "critically reflective attitude" is not without a tinge of bias. Note, for example, his description of the role of "moral conscience" in what he terms "the Church of the Middle Ages." In those dark days, clients in search of moral guidance turned to "cases of conscience," "elaborated gradually into the famous science of casuistry," which were designed "to report God's judgment on every conceivable kind of behavior." The priest in the confessional judged a particular man's doings by reference to "these tabulations," "cases of conscience," "just as the lawyer today seeks the right precedent for the case before him, in previous court decisions." And, to think that Dr. Tsanoff introduces his discussion of theological ethics with the remark, "We can understand how men have sought an explanation of conscience by appealing to the supernatural."

A word concerning our author's preferences in the realm of ethical theory. The conflict in ethical experience, he tells the reader, between "the demand for unity and authoritative principle seeking to affirm itself by intuitive fiat," on the one hand, and "the disturbing citation of actual diversity and change in moral judgment, with no universal sanctions in prospect," necessitates a more critical grasp of the moral problem. That more adequate moral theory Dr. Tsanoff finds in a truly scientific and empirical ethics expressed in terms of "achievement of character and personality." Moral conscience, he continues, is found to be "a developing but also a baffling authority"; it is "the voice of man's fuller self, the man that may yet be." My moral decision and the resultant moral action are correctly termed "a venture on my conviction." To act conscientiously is but to function "according to the best light that we recognize." Possibly Dr. Tsanoff could account for the "fanaticism" of Adolph Hitler by showing that *Der Fuehrer* was without "critical self-reliance" and "resolute self-criticism, moral qualities so necessary, according to our author, for the attainment of the "fuller self." Does Dr. Tsanoff feel he could likewise demonstrate that Hitler and his followers were not acting "according to the best light" they recognized?

One must grant that Dr. Tsanoff does attain some of the goals envisaged in the writing of his manual. His *Ethics* is provocative, it presents many moral problems, it provides much opportunity for discussion. Also, we think that his manual is further evidence of the dismal failure of his evolutionary naturalism to provide a satisfactory answer to the question: Why be moral?

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A Short History of Philosophy. **By F.-J. Thonnard, A.A. Translated from the revised and corrected edition by Edward A. Maziarz, C.PP.S., M.S., Ph.D. Tournai and New York: Desclée 1955. Pp. x + 1074. $6.50.**

One of the main purposes of this history, the author tells us, is to serve as an introductory manual for seminarians. As such it completes Desclée's well known set of texts on theology and patrology which has included to date the works of Diekamp, Tanquerey and Cayré. It is

offered also in a more general way for college students and the cultured reading world.

The translator, with an eye on the English-speaking segment and, no doubt, with special reference to the problem of American seminarians, notes that Turner's *History of Philosophy* though good is "now out of date"; Copleston's authoritative *History of Philosophy* has already run to three volumes (in reaching the era of Suarez); DeWulf's standard *History of Medieval Philosophy*, Gilson's magnificent *History of Christian Philosophy in the Middle Ages* and James Collins' masterful *History of Modern European Philosophy* all deal with special periods and do not meet the comprehensive aim of the usual undergraduate course. The present reviewer would add also that the more prosaic matter of expense puts these altogether desirable studies out of the reach of most seminarians.

In the light of these considerations, Father Maziarz has unquestionably done us a service: Thonnard's *History* is a rather complete, quite handy volume and the translator has fulfilled his own function expertly. As an instrument in the hands of a teacher the history is to be heartily recommended. It is clear, orderly and judicious; there are excellent indices and tables which break down the matter into the divisions and subdivisions of philosophy and correlate them in an admirable fashion.

On the negative side, one might object that the work is possibly too "traditional"—which is by no means to say that it is erroneous in any important respect. By way of illustration we would, for example, like to see some space devoted to the so-called "Socratic Problem," the interrelations of Socrates and Plato, or some discussion of the criticisms leveled at the validity of Aristotle's approach to the history of philosophy. Then, too, the contemporary influence of the philosophy of John Dewey merits more attention and needs fuller treatment than a general section on pragmatism can afford. Thirdly, even if it be true that logical positivism in its various forms has spent its force, a modern student still needs to know what it was essentially, for he will still meet it in the philosophical "demi-monde" of the literate press.

But these strictures are slight, indeed. The work purports to be simply a manual, no more. It is an excellent manual. It is the responsibility of the teacher to do the rest.

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Kierkegaard and Heidegger: The Ontology of Existence. **By Michael Wyschogrod. New York: The Humanities Press, 1954. Pp. 156. $3.00.**

Kierkegaard (as Johannes de Silentio) concludes *Fear and Trembling* with these words: "Heraclitus the obscure said, 'One cannot pass twice through the same stream.' Heraclitus the obscure had a disciple who did not stop with that, but went further and added, 'One cannot even do it once.' Poor Heraclitus, to have such a disciple! By this amendment the thesis of Heraclitus was so improved that it became an Eleatic thesis which denies movement, and yet that disciple desired only to be a disciple of Heraclitus . . . and go further—not back to the position Heraclitus had abandoned." Kierkegaard, who has no small claim to obscurity himself, did not want any disciples. Inevitably, therefore, he has had many. In this excellent book Michael Wyschogrod, of C. C. N. Y., examines an attempt by Martin Heidegger to lead the discussion of human existence back into ontology whence Kierkegaard had rescued it.

To read of the ontology of Kierkegaard is every bit as surprising as would be a discussion of the metaphysics of the historical Socrates, but in the well-balanced plan of this book the initially alarming transformation of Kierkegaard emerges as a teleological suspension of the ethical. The author was faced with a disciple of Kierkegaard whose interest is ontology, and he has chosen to compare Kierkegaard and Heidegger on the basis of their respective ontologies. The movement from metaphysical to ethical matters is accomplished in what is identified as a Thomistic framework.

In the opening chapter, Dr. Wyschogrod traces rapidly the problems relating to being. The discussion arrives at an opposition of essence and existence and at what has become the familiar dichotomy, Essentialism/ Existentialism. By describing Plato as an Essentialist and then linking Hegel to Plato, the author enables himself to bring Kierkegaard on stage as one who has reacted against Hegel in defence of Existentialism.

This discussion takes place on a heady, speculative level to which Kierkegaard never aspired, and in the following chapter the author is quick to point out that Kierkegaard was not a metaphysician. He does feel, however, that something analogous to the metaphysical distinction between essence and the act of existence is operative in Kierkegaard's thought. Existence, for Kierkegaard, is not the *actus essendi*, but being

as a man, becoming what one ought to be. This is the acquisition of *esse*, of course, of an *esse secundum quid* which is opposed to *esse simpliciter* and in virtue of which one is *bonus simpliciter*. (*Summa Theol.*, I, 5, 1, ad 1.) Given this analogy, the attempt is made to work backwards out of Kierkegaard's ethical discussions to an ontological position which is thought to be consonant with "existential ontology."

What the author finds implicit in Kierkegaard is quite explicit in Heidegger. Heidegger's interest is ontology, but it is his point of departure that he derives from Kierkegaard. The kind of existence that we have, *Dasein*, is that in terms of which an ontology has to be constructed. One of the major contributions of Dr. Wyschogrod's book is the indication of the cause of Heidegger's failure in this attempt. The theory is put forward that *Sein und Zeit* has not been completed because Heidegger himself has come to realize that he had started on the wrong foot. The author points out the signs of quite another approach to the problem of *being* in Heidegger's later writings which have as their point of departure an analysis of art. Wyschogrod does not discuss whether this new approach avoids the difficulties of the previous one, although he quotes Heidegger's disavowals of subjectivism. Nevertheless, the judgment on the failure of Heidegger's original attempt is a distinct contribution.

It is just this, however, which raises a rather serious problem. If Heidegger was bound to fail in his attempt to erect an objective ontology on the basis of an analysis of human subjectivity, what are we to say of the author's efforts to do the same thing in chapter two? What kind of ontology can possibly be derived from ethics? Kierkegaard's ontology is defined as "a translation into conceptual terms of the existential predicament of the thinker" (p. 136). But the existential predicament of the thinker is precisely that existence, i. e. action, is not reducible to thought or speculation. Observations about human action can hardly qualify as metaphysics even though prudence is *sapientia viro*. Ethics could only be "First Philosophy" if man were the apex of being. "*Prudentia est circa bona humana, sapientia autem circa ea quae sunt homine meliora.*" (*In VI Ethic.*, 6, n. 1191.) A humanistic metaphysics is an impossibility, and existentialism *is* a humanism.

What is being suggested is that the author has come dangerously close to the same error that he has so brilliantly examined in Heidegger. But then it is one thing to say that Kierkegaard presupposes an objec-

tive framework, and another to derive an ontology from his ethical existentialism.

The student of Kierkegaard will find chapter four of especial interest, for it is an analysis of Kierkegaard in Kierkegaard's own terms and with a respect for the truth which Kierkegaard has set in bold relief. All should find this book of value, and the Thomist will find the usage of certain Thomistic positions of interest. One hopes that this book will be followed by many others from the pen of Michael Wyschogrod, for they would surely exhibit the same careful analysis prior to any judgment that is an outstanding feature of the present volume.

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Introduction to the Science of Metaphysics. **By Henry J. Koren. St. Louis: B. Herder Book Co., 1925. Pp. xix + 291, with index. $4.50.**

This textbook is meant to serve as an introduction to "the Thomistic theory of Being" in undergraduate schools. It is greatly to the author's credit that he has made this introduction about as painless as it seems possible. He has combined a simple and clear style of writing with a number of helpful devices, such as chapter summaries, review questions, brief historical notes that bring into sharper focus the Thomistic doctrines, and suggested readings which refer the student not only to works of generally recognized merit but also to a goodly number of excellent articles that have appeared in recent years in such journals as THE NEW SCHOLASTICISM and *The Modern Schoolman.* He has an enviable knack for exposing metaphysical problems and their solutions in a succinct but clear manner.

After a brief introduction about the nature of the science of metaphysics, the author divides his work into two parts: the philosophy of being in general, and the philosophy of finite being. In the first section he treats of the nature of being, the concept of being and its abstraction, analogy, the transcendental properties, and act and potency. In the second, he deals with essence and "to be," their multiplication, individuation, possible being, the categories, supposit and person, and

the causes. None of the explanations of these various subjects is very extensive—which of course is fitting and proper in view of the intended introductory character of this work—but taken as a whole, this textbook should give a beginner a worthwhile grasp of the fundamentals of Thomistic metaphysics.

Objections might be raised against a few of the positions taken by the author. For example, although this textbook is stated to be Thomistic, the author employs a division of philosophy that would find greater favor with Christian Wolff than Thomas Aquinas. It is stated that metaphysics is one science because of the unity of its formal object. However, it can be divided into certain sections, such as theodicy, cosmology (the metaphysics of inanimate nature), psychology (the metaphysics of animate nature) etc. Each section is concerned with applications of general metaphysical principles to various types of beings. One wonders why there is no section entitled mathematics, the metaphysics of quantity. In a word, philosophy is identified with metaphysics and the philosophy of nature as a distinct science is annihilated. The author justifies this legerdemain as Thomistic by saying that "St. Thomas clearly indicates that certain questions of natural philosophy belong to the metaphysical level." The author then consigns these "certain questions" to metaphysics and portions out what is left of natural philosophy to the modern physical sciences. The annihilation is complete. To support his view he quotes *In Boethium de Trinitate* q. V, a. 1 ad 6. However he does not quote the first part of this answer which runs as follows: "Although the subject of other sciences are parts of being, which is the subject of metaphysics, these other sciences ought not to be considered parts of metaphysics. Each science considers one phase of being, or reality, according to a special mode, which is different from that according to which being is viewed by metaphysics. Therefore properly speaking, the subject of such a science is not a part of the subject of metaphysics, but according to its own manner of viewing reality, each special science is differentiated from the others." In this passage St. Thomas is obviously distinguishing mathematics and natural philosophy (cf. objection) from metaphysics by reason of their respective formal objects. Numerous texts can be found in many places in the works of St. Thomas which maintain this same distinction.

Furthermore one might ask: What is this cosmology, psychology, etc. which is ranked as a section of metaphysics? The author states that metaphysics abstracts from all matter. Can one study material beings

as such by abstracting from their matter? Why can there not be a science of changing being as changing? Why cannot material being be viewed from the standpoint of change or motion?

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Book Brevities

The Moral Foundation of Democracy. **By John H. Hallowell. Chicago: The University of Chicago Press, 1954. Pp. ix + 134. $3.50.**

Professor Hallowell of Duke University gives us a vigorous and incisive statement of the basic ethical tenets of democratic life. Deploring the dominance of positivism in most of our modern political thought, he argues that democracy has its roots in the Hebraic-Greek-Christian tradition, and that it cannot exist except as an active embodiment of the ideas of the nature and end of man as expressed in that tradition. This book is most deserving of careful study.

Modern Political Thought: the Great Issues. **By William Ebenstein. New York: Rinehart & Company, 1954. Pp. xvii + 806, with index. $6.50.**

This volume is a revision, with numerous additions, of Ebenstein's earlier *Man and the State: Modern Political Ideas.* Ebenstein aims at presenting the richness and complexity of modern political thought, particularly as it affects world events. Rather than adopt the chronological and biographical approach, he has wisely elected to group selections from representative thinkers around "the great issues." And he prefaces each chapter of selections with an always illuminating introductory essay of his own.

Ens et Unum Convertuntur: **Stellung und Gehalt des Grundsatzes der Philosophie des Hl. Thomas von Aquin. By Dr. Ludger Oeing-Hanhoff. Münster: Aschendorffscher Verlagsbuchhandlung, 1953. Pp. xv + 194, with index. DM 13, 50.**

Dr. Oeing-Hanhoff has written a most penetrating study of the fundamental principles of St. Thomas' metaphysics. He gives particular attention to the reasons for the convertibility of *ens* and *unum*, and to the place of these two in St. Thomas' teaching on the transcendentals. It is to be hoped that this valuable work will soon be translated into English.

History of Mediaeval Philosophy. **By Maurice de Wulf. Translated by Ernest C. Messenger. Volume One: From the Beginnings to the End of the Twelfth Century. New York: Dover Publications, Inc., 1952. Pp. xviii + 317. $4.00.**

Professor De Wulf died in 1947, hence this will be the last revision of his standard work to come from his pen. The English version was made from the sixth French edition, of 1946. One of the pioneers in this field, De Wulf improved his *History* with each revision, gradually revising his conception of the meaning of scholasticism. The bibliographies in the book end with 1933. However, it is useful to have a book which summarizes the interpretations of the late nineteenth and early twentieth centuries. The publishers do a service in bringing out this well-printed book.

Physics and Microphysics. **By Louis de Broglie. Foreword by Albert Einstein. New York: Pantheon Books, 1955. Pp. 286, with index. $2.75.**

With the clarity that has become a mark of his writings, de Broglie here presents a series of essays dealing with problems of physics from its exploration of the atom to its technical and social impact. Of special interest to the readers of this journal are the brilliant opening chapters dealing with the structure of matter. First given as a series of lectures, the essays are not all pitched at the same level. However, the book as a whole is far from a mere popularization.

The Logic of Modern Science. **By J. R. Kantor. Bloomington, Ind.: The Principia Press, 1953. Pp. xvi + 359, with index. $6.00.**

The theme of this work is that the various modern sciences can be understood only in terms of behavioral interactions between man and his physical and cultural environment. Though extreme and even monistic in its final solution of the nature of science, the book, replete with examples and with documentation, is a stimulating essay on that component of relativity which leads St. Thomas to remark that human knowledge is for the most part tinged with falsity.

The Ruler: A Modern Translation of Il Principe. **By Niccolo Machiavelli. Introduction by A. Robert Caponigri. Chicago: Henry Regnery, 1955. Pp. xxi + 132. $0.85.**

This work, translated by Peter Rodd, is a member of a new paper bound series of classics called Gateway Editions. In addition to the introduction by Caponigri, there is an eighteen page note, mostly concerned with the biography of Machiavelli, provided by the translator.

Thought and Statement. **By William G. Leary and James Steel Smith. New York: Harcourt, Brace and Company, 1955. Pp. xii +538.**

This is principally an anthology of examples involving good and bad logic, together with questions for discussion and decision. Intended originally for use in English classes, the work should prove useful to logic teachers in assigning projects for classroom discussion and extra-class papers. The selections range from the writings of Shakespeare to those of Thurber, and in great part they provide interesting concrete exercises especially for those parts of logic not concerned with strict demonstration.

Translations in Progress

Rev. Edward A. Bushinski, C. S. Sp., of St. Mary's Seminary, Norwalk, Conn., is translating John of St. Thomas' *Commentary on the Summa Theologiae*, Part 1, Q. 2.

Erratum

In the Book Review on page 101 of the January issue, the name of the author of the book was omitted. The author's name is Ismael Quiles, S. J.; the book in question is *La persona humana. Fundamentos psicologicos y metafisicos.*

Books Received

Aquinas, St. Thomas. Translated with an introduction by Anton C. Pegis. *On The Truth of The Catholic Faith* (Summa Contra Gentiles). Volume 1. New York: Hanover House, 1955. Pp. 317, with index. $2.50.

Arnett, Willard E. *Santayana and The Sense of Beauty.* Bloomington, Indiana: Indiana University Press, 1955. Pp. xv + 252, with index. $4.50.

Battaglia, Felice. *La Valeur dans L'Histoire.* Paris: Editions Montaigne, 1955. Pp. 207. Frs. 525.

Bonforte, John. *The Philosophy of Epictetus.* New York: Philosophical Library, 1955. Pp. xiv + 146. $3.00.

Brownson, Orestes. *Selected Essays.* Edited by Russell Kirk . Chicago: Henry Regnery Company, 1955. Pp. 266. $0.95.

Bryson, Lyman, Finkelstein, Louis, Hoagland, Hudson, and Maciver, R. M., Editors. *Symbols and Society.* New York: Harper and Brothers, 1955. Pp. 611. $6.00.

Buchler, Justus. *Philosophical Writings of Peirce.* New York: Dover Publications, Inc., 1955. Pp. xvi + 386, with index. $1.95.

Burke, Edmund. *Reflections on The Revolution in France.* Chicago: Henry Regnery Company, 1955. Pp. 350. $1.25.

Burleigh, Walter. *De Puritate Artis Logicae Tractatus Longior.* Edited by Philotheus Boehner, O. F. M. St. Bonaventure, N. Y.: The Franciscan Institute, 1955. Pp. xvi + 264, with index.

Buytaert, Eligius M., Editor. *Saint John Damascene de Fide Orthodoxa Versions of Burgundio and Cerbanus.* St. Bonaventure, N. Y.: The Franciscan Institute, 1955. Pp. liv + 423, with index.

Campbell, Joseph, Editor. *Papers From the Eranos Yearbooks.* New York: Pantheon Books, Inc., 1955. Pp. xvi + 476, with index. $5.00.

Carpenter, Frederic I. *American Literature and the Dream.* New York: Philosophical Library, Inc., 1955. Pp. vi + 220, with index. $4.75.

Croteau, Jacques. *Les Fondements Thomistes du Personalisme de Maritain.* Ottawa: Editions de l'Université d'Ottawa, 1955. Pp. 259, with bibliography. $4.50.

Croxall, T. H., Translator and Editor. *Meditations From Kierkegaard.* Philadelphia: The Westminster Press, 1955. Pp. 165. $3.00.

Culler, A. Dwight. *The Imperial Intellect.* New Haven, Connecticut: Yale University Press, 1955. Pp. xiii + 327, with index. $5.00.

Darwin, Charles. *The Expression of the Emotions in Man and Animals.* New York: The Philosophical Library, 1955. Pp. 372, with index. $6.00.

de Tocqueville, Alexis. *Democracy in America.* Mentor Book. New York: New American Library, 1956. Pp. 320. $0.50.

de Werla, Henrici, O. F. M. *Tractatus de Immaculata Conceptione Beatae Mariae Virginis.* Edited by Sophronius Clasen, O. F. M. St. Bonaventure, N. Y.: The Franciscan Institute, 1955. Pp. xxvii + 109.

Dotterer, Ray H. *Postulates and Implications.* New York: The Philosophical Library, 1955. Pp. 507, with index. $7.50.

Dumeige, Gervais. *Épître à Séverin sur la Charité Richard de Saint Victor: les Quatre Degrés de la Violente Charité.* Paris: Librarie Philosophique J. Vrin, 1955. Pp. 200, with index.

Fleckenstein, Norbert J. *A Critique of John Dewey's Theory of The Nature and The Knowledge of Reality in The Light of The Principles of Thomism.* Washington: The Catholic University of America Press, 1955. Pp. vii + 193, with index. $2.25.

Fromm, Erich. *The Sane Society.* New York: Rinehart & Company, Inc., 1955. Pp. xiii + 370, with index. $5.00.

Hampshire, Stuart, Commentator. *The Age Of Reason.* Mentor Book. New York: New American Library, 1956. Pp. 192. $0.50.

Henry, A. M., Editor. *God and His Creation.* Chicago: Fides Publishers, 1955. Pp. 511, with index. $6.50.

Hutchins, Robert M. *Great Books: the Foundation of a Liberal Education.* New York: Simon and Schuster, 1954. Pp. 115. $3.00.

Johnson, Samuel. *Lives of the English Poets Selections.* Chicago: Henry Regnery Company, 1955. Pp. xi + 400. $1.25.

Jung, C. G. and Pauli, W. *The Interpretation of Nature and the Psyche.* New York: Pantheon Books, 1955. Pp. vii + 247, with index. $3.00.

Koren, Henry J. *Introduction to the Philosophy of Animate Nature.* St. Louis: B. Herder Book Co., 1955. Pp. xiii + 341, with index. $4.75.

Lamprecht, Sterling P. *Our Philosophical Traditions.* New York:

Appleton-Century-Crofts, Inc., 1955. Pp. xi + 523, with index. $5.50.

Landis, Benson Y., Editor. *Ethical Standards and Professional Conduct.* Philadelphia: The American Academy of Political and Social Science, 1955. Pp. vii + 199, with index.

Lazerowitz, Morris. *The Structure of Metaphysics.* New York: The Humanities Press, Inc., 1955. Pp. xiii + 280, with index. $5.00.

Machiavelli, Niccolo. *The Ruler: A Modern Translation of il Principe.* Chicago: Henry Regnery Company, 1955. Pp. xii + 132. $0.85.

Manning, Henry Parker. *Geometry of Four Dimensions.* New York: Dover Publications, Inc. Pp. 348, with index. $3.95.

Martin, P. W. *Experiment In Depth.* New York: Pantheon Books, 1955. Pp. 275, with index. $4.50.

McWilliams, James A., S. J., Editor. *Progress in Philosophy.* Milwaukee: The Bruce Publishing Company, 1955. Pp. vi + 216. $5.00.

Michener, Norah Willis. *Maritain on the Nature of Man in a Christian Democracy.* Hull, Canada: Editions "L'Eclair," 1955. Pp. xii + 149, with index. $4.25.

Nietzsche, Friedrich. *Beyond Good and Evil.* Chicago: Henry Regnery Company, 1955. Pp. xiii + 241. $0.95.

Occhio, Giuseppe. *Umanesimo Americano Anti-Deweyano.* Torino: P. A. S., 1955. Pp. xxix + 243. No price listed.

Parrot, André. *The Flood and Noah's Ark.* New York: Philosophical Library, 1955. Pp. 76, with index. $2.75.

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